THE RESOURCES AGENCY OF CALIFORNIA

Department of Water Resources

BULLETIN No. 94-3

LAND AND WATER USE IN YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Volume I: Text

Preliminary Edition

SEPTEMBER 1963

HUGO FISHER
Administrator
The Resources Agency of California

EDMUND G. BROWN
Governor
State of California

WILLIAM E. WARNE
Director
Department of Water Resources

State of California

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EDMUND G. BROWN
GOVERNOR OF
CALIFORNIA

HUGO FISHER
ADMINISTRATOR
RESOURCES AGENCY

ADDRESS REPLY TO
P. O. Box 388
Sacramento 2, Calif.

THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES
1120 N STREET, SACRAMENTO

June 27, 1963

Honorable Edmund G. Brown, Governor,
and Members of the Legislature
of the State of California

Gentlemen:

I have the honor to transmit herewith preliminary report Bulletin No. 94-3, the third of a series of reports of the Department of Water Resources which present detailed basic data relative to land and water use and apparent water rights within certain hydrographic units of the State. This report, entitled "Land and Water Use in Yuba-Bear Rivers Hydrographic Unit," presents results of studies conducted pursuant to legislation sponsored by Senator Edwin J. Regan and codified under Section 232 of the Water Code. This series, when complete, will form an invaluable reference of the water resources of the State in relation to the various classes and uses of land resources.

The data contained in this series of reports provide a basis for estimates of the amount of water which originates within each watershed, the amount which can be used beneficially within each area, and the amount of surplus or deficiency, therein. These estimates are being included in the staging of projects to develop most efficiently the water resources of the State.

The data presented in this bulletin will provide a factual basis for decisions of concerned interests regarding the development and use of the water resources of the Yuba-Bear Rivers Hydrographic Unit. In addition, the bulletin includes notes on the history, natural features, climate and economy of the unit.

All public and private agencies, local interests, and individuals who may be concerned with the information presented herein are invited to submit their comments. A public hearing will be held after due notice to receive comments which will be considered in preparing the final report.

Sincerely yours,

William E. Warne

Director

STATE OF CALIFORNIA
THE RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

EDMUND G. BROWN, Governor
HUGO FISHER, Administrator, The Resources Agency of California
WILLIAM E. WARNE, Director, Department of Water Resources
ALFRED R. GOLZE, Chief Engineer
JOHN R. TEERINK, Assistant Chief Engineer

The investigation leading to this report
was conducted by the
Delta Branch
under the direction of

Carl A. Werner . . . . . Chief, Delta Branch

This report was prepared under the supervision of

Leland R. Illingworth. . . . . Supervising Engineer
Charles F. Kleine. . . . . Senior Engineer

by

Lawrence E. Swenson, Jr. . . . . Senior Engineer
Roy N. Haley . . . . . .Senior Land and Water Use Analyst
C. Laurence Linser . . . . . .Assistant Civil Engineer
Robert L. Dembroge . . . . . .Assistant Civil Engineer

Statewide aspects of the
Water Requirements and Project Staging Program
are coordinated under the direction of the
Division of Resources Planning

William L. Berry. . . . . Division Engineer
Meyer Kramsky . . . . . Chief, Statewide Investigations Branch
Ralph G. Allison,Acting Chief, Planning Investigations Section

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WILLIAM M. CARAH
Executive Secretary

GEORGE B. GLEASON
Principal Engineer

ACKNOWLEDGMENT

The Department of Water Resources gratefully acknowledges information contributed by the numerous water users and residents of the Yuba-Bear Rivers Hydrographic Unit and various agencies of the federal, state, and local governments.

Special mention is made of the helpful cooperation of the farm advisors of Nevada, Placer, and Yuba Counties; Pacific Gas and Electric Company; Nevada Irrigation District; Placer County Water Agency; Nevada County Water Resources Committee; and Yuba County Water Agency.

FOREWORD

In 1956, the State Legislature declared "that in providing for the full development and utilization of the water resources of this State it is necessary to obtain for consideration by the Legislature and the people, information as to the water which can be made available for exportation from the watersheds in which it originates without depriving those watersheds of water necessary for beneficial uses therein." The Department of Water Resources was, therefore, authorized and directed to conduct such investigations as necessary to compile this information. To do so, the department began its statewide inventory of water resources and water requirements as outlined in the authorizing legislation (Water Code Section 232).

For purposes of this inventory, the State has been divided into major hydrographic areas. These areas, in turn, have been subdivided into hydrographic units generally comprising watersheds of individual rivers. Basic data, consisting of land and water use, classification of lands, and streamflow measurements, are collected for each hydrographic unit. To date, this activity has been concentrated mainly in northern watersheds. Results of this inventory will be presented in two series of reports covering (1) land and water use, and (2) water resources and water requirements.

The data on land and water use, together with land classification, are being published as the Bulletin 94 series; one for each hydrographic unit. This report covering the Yuba-Bear Rivers Hydrographic Unit is the third in the series. As the data relative to particular hydrographic units are published they become available for general studies and project investigations, not only by the department, but by all other parties concerned with the watersheds covered. When completed, this series of bulletins will provide detailed data for the whole State.

A second series of reports, each covering one or more hydrographic units, will include determinations of the available water resources and future requirements of those areas. The water resources will be determined from the records of older stream gaging stations and a number of new stations mainly on smaller streams not previously measured. The determination of water requirements will be based on land use patterns projected for specific points of time. These projections, in turn, will be based on the land and water use and land classification data, such as contained herein, and other available information.

Although the data developed by this inventory are to be used throughout the department's planning activities, they are most urgently needed for the staging of water projects. For this reason, the development of these data and their application to the timing of projects were combined in the Water Requirements and Project Staging program in 1961. Under this program, determinations of the quantities of water available, and the time, place, and magnitude of the future water needs of the entire State are combined in the formulation of a sequence of projects to meet those needs. An interim staging report will be published in 1963-64.

CHAPTER I. INTRODUCTION

This bulletin presents basic data on land and water use in the Yuba River and Bear River watersheds and adjacent lands above the Sacramento Valley floor. This area is designated herein as the Yuba-Bear Rivers Hydrographic Unit. The data cover present land and water use, classification of lands, systems used to divert surface stream waters, histories of diversions, apparent water rights pertinent to each diversion, purpose and extent of use of diversions, seasonal quantities of water diverted during part or all of the years 1957 and 1958, and studies of consumptive use of water in selected areas of the unit. A general description and a brief history of the area are also included.

These basic data were gathered during the period 1956-58 in compliance with Chapter 61, Statutes of 1956, as amended by Chapter 2025, Statutes of 1959, and codified in Section 232 of the Water Code of the State of California. The text of Section 232, with a discussion of its history and implications, is included in this bulletin as Appendix A.

These data will provide the basis for a future determination of quantities of water reasonably required for future beneficial use within the Yuba-Bear Rivers Hydrographic Unit. The determinations will be based on estimates of (1) future land use, (2) economic patterns, (3) populations, (4) industrial and agricultural development, and (5) recreational needs.

The data presented herein have been reviewed in preliminary form by local water users and officials representing Placer, Nevada, Yuba, and Sierra Counties. Placer County data received review from Placer County Water Agency, Placer County Farm Advisor, Placer County Planning Commission, and local water users; Nevada County data received review from Nevada County Water Resources Committee, Nevada County Farm Advisor, and local water users; Yuba County data received review from the Water Committee of the Yuba County Board of Supervisors and the Yuba County Farm Advisor; and Sierra County data received review from the Sierra County Board of Supervisors. These groups and individuals submitted suggested changes which were reviewed in the field and adjustments made where warranted.

Organization of Report

This bulletin consists of five chapters, four appendixes and six plates. Chapter I contains a general description of the Yuba-Bear Rivers Hydrographic Unit. Chapter II, "Water Use," includes data on surface water diversion systems, related water rights information, measurements of quantities of water diverted, and information on consumptive use studies. Chapter III, "Land Use," includes a history of land use within the unit and tables of present land use. Maps prepared in connection with Chapters II and III delineate the areas of various present land uses, locations of diversion systems, and areas where consumptive use studies were made. Chapter IV,

"Land Classification," includes a tabulation of lands classified with regard to their potential for irrigated agriculture and for recreational purposes. Maps prepared for this chapter delineate the respective classes of land grouped into several major categories. Chapter V, "Summary," summarizes the report.

Appendix A presents the text of Section 232 of the California Water Code and a discussion of the pertinent responsibilities and work program of the Department of Water Resources. Appendix B is a bibliography of publications pertinent to the Yuba-Bear Rivers Hydrographic Unit. Appendix C presents a short summary of California water law, a review of litigation involving water rights in the Yuba-Bear Rivers Hydrographic Unit, and a tabulation of applications to appropriate water in the unit. Appendix D presents details of diversions which could not be adequately described in tables contained in Chapter II.

General Description of Area

Location

The Yuba-Bear Rivers Hydrographic Unit, shown on Plate 1, "Location of Unit," lies within the Sacramento River Basin in portions of Butte, Nevada, Placer, Plumas, Sierra, and Yuba Counties. The hydrographic unit contains 1,955 square miles and is drained by the Yuba River, the Bear River, and minor streams between the Yuba River on the north and Miners Ravine on the south. The two rivers meander on a generally westerly course to their terminations at the Feather River.

The minor streams south of the Bear River drain to the Sacramento River.

The unit is bounded by the watersheds of the Feather River on the north, the Truckee River on the east, and the American River on the south. On the west it is bounded by the Sacramento Valley floor, defined in part by the western boundaries of Beale Air Force Base, Nevada Irrigation District, and the City of Lincoln. Between Lincoln and Roseville, the edge of the valley floor is defined by an irregular line which approximates the 200-foot contour. The more important minor streams draining the foothill area, but not joining the Yuba or Bear Rivers within the unit boundaries, include French Dry Creek, Coon Creek, Auburn Ravine, Antelope Creek, and Miners Ravine. The unit boundary is shown in detail on the series of sheets comprising Plate 2, "Land and Water Use in Yuba-Bear Rivers Hydrographic Unit."

For purposes of convenience and utility in reporting data, the unit has been subdivided into 22 subunits. Locations of these subunits are shown on Plate 1, and the area of each is shown in Table 1.

TABLE I

AREAS OF SUBUNITS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Subunit	Butte County (in acres)	Nevada County (in acres)	Placer County (in acres)	Plumas County (in acres)	Sierra County (in acres)	Yuba County (in acres)	Total area	
							In acres	In square miles
Alleghany	0	40,500	0	0	45,900	0	86,400	135
Auburn Ravine	0	0	23,600	0	0	0	23,600	37
Bullards Bar	300	0	0	0	2,100	50,100	52,500	82
Camp Beale	0	0	0	0	0	27,500	27,500	43
Camp Far West	0	20,800	16,100	0	0	4,200	41,100	64
Combie	0	13,900	17,200	0	0	0	31,100	49
Coon Creek	0	0	54,500	0	0	0	54,500	85
Deer Creek	0	57,000	0	0	0	200	57,200	89
Donner Pass	0	115,100	11,500	0	0	0	126,600	198
Dry Creek	0	38,600	0	0	0	19,600	58,200	91
Dutch Flat	0	23,100	13,700	0	0	0	36,800	57
French Corral	0	42,800	0	0	0	0	42,800	67
French Dry Creek	900	6,900	0	0	0	91,400	99,200	155
Goodyears Bar	0	0	0	0	92,300	600	92,900	145
Greenhorn Creek	0	28,000	0	0	0	0	28,000	44
La Porte	0	0	0	11,800	55,800	10,600	78,200	122
Orchard-Pleasant Grove Creeks	0	0	12,900	0	0	0	12,900	20
Pike	0	19,800	0	0	23,100	26,100	69,000	108
Rocklin	0	0	36,700	0	0	0	36,700	57
Sierra City	0	0	0	0	90,200	0	90,200	141
Washington	0	56,000	0	0	0	0	56,000	88
Wolf Creek	0	49,800	0	0	0	0	49,800	78
TOTAL	1,200	512,300	186,200	11,800	309,400	230,300	1,251,200	1,955

Historical and Present Development

The history of early development in the Yuba-Bear Rivers Hydrographic Unit parallels that of the California pioneers and gold miners. Many of the pioneers came west across the Sierra Nevada through this area in the latter 1840's, and the gold miners came soon thereafter. The first recorded explorations into the unit were made in about 1839 by John A. Sutter, and were confined largely to the lower foothills. The first crossing of the Sierra Nevada was made by a pioneer party headed for Sutter's Fort in 1844. In the same year the first settlement in this area was made on the north bank of the Bear River at Johnson's Crossing, located near the western boundary of the unit.

The discovery of gold at Coloma, on the South Fork of the American River in January 1848, caused a great influx of people into the Mother Lode region of California, which includes most of the hydrographic unit. These early gold seekers obtained gold from the shallow river sands and gravels by digging the flakes of gold from crevices in the bedrock of streambeds. During the period from 1848 to the early 1850's there was a very rapid advance in methods and technology, and this crude method was soon followed by the use of the miner's pan and later in turn by the miner's cradle, the long tom, and the miner's sluice box. Later the ground-sluicing method and finally hydraulic mining were developed. These improved methods were required as the easy-to-obtain shallow river

gravels became exhausted and it was necessary to wash larger and larger amounts of gravel for profitable operation. Each of the new methods required an increasingly large amount of water.

Ground sluicing and hydraulic mining developed when it was discovered that ancient sidehill gravel deposits contained gold. By the ground-sluicing method a stream of water was brought to the gravel bank and allowed to flow over its face and carry loosened gravel to a sluice below. This method brought about the discovery of hydraulic mining in 1853, just north of Nevada City by Edward E. Mattison, who found that by using a hose and nozzle a stream of water under pressure could be used to undermine and wash the gravel into sluice boxes. This was a great improvement over the other methods, and its use started the construction of a great system of reservoirs and canals needed to supply water for dozens of large mines in the Sierran Gold Belt.

Hydraulic mining was a boon to gold mining but was a great detriment to agriculture and to navigation on navigable streams in the Sacramento Valley. Large volumes of hydraulic mining debris were discharged into stream channels and by 1858 some of the debris reached lower agricultural lands on the Yuba River. By 1879 debris had caused the low-water plain at Sacramento to rise 5 to 5-1/2 feet. The damage done by the mining debris resulted in considerable litigation and two injunctions which were obtained practically ended hydraulic mining in the Sacramento River Basin. In 1882 an

injunction was secured in the Superior Court in Sacramento County against the Gold Run Ditch and Mining Company, and on January 7, 1884, the Federal Court granted an injunction against the North Bloomfield Gravel and Mining Company, et al. In this federal case, Wooddruff v. North Bloomfield Gravel and Mining Company, et al., Judge Lorenzo Sawyer's decision prohibited all hydraulic mining in areas tributary to the Sacramento River, except that done behind a retaining wall or dam. Very few hydraulic mines continued in operation after that time.

In 1893 the United States Congress created the California Debris Commission which, among other duties, is charged to study practical methods whereby hydraulic mining may be resumed. The Debris Commission now licenses hydraulic mining operations and requires that they be carried on behind restraining dams. In addition, the commission can make surveys of sites for, and construct, debris control structures. At the present time the commission has constructed two such structures within the Yuba-Bear Rivers Hydrographic Unit. These are the Daguerre Point Dam and the Englebright Dam on the Yuba River. In addition to these, Bullards Bar Dam constructed as a debris control structure and the Nevada Irrigation District has reserved space in two of its reservoirs for storing mining debris.

The final development in placer mining came in 1898 when dredging of gold from river beds was first successfully accomplished. The dredges have increased in capacity and efficiency so that now a modern dredge may excavate 125,000 cubi

yards of material a week with a crew of only three or four men per shift. Gold dredging has been practiced on many streams within the Yuba-Bear Rivers Hydrographic Unit, but currently the only dredging being practiced is on the Yuba River near Hammonton.

About the same time that hydraulic mining was beginning, the working of hillside gravel and outcrops by means of shafts and adits was started. This method of mining, however, has not suffered from the restrictions placed on hydraulicking, since no stream debris is created.

Gold-bearing quartz was first found in the fall of 1850 in the gold field in Grass Valley. It has been estimated that $2 million worth of gold was taken from within a few feet of the surface of Gold Hill. The more important quartz mines in the Grass Valley area and the dates they were located are: Empire Mine, 1850; Eureka Mine, 1851; North Lone Star Mine, 1852; and Idaho Mine, 1867. The Eureka Mine ceased operation in 1914, while the others continued to operate until 1957 when the mines closed because of labor strife and the unprofitable price of gold.

Gold production in California declined rapidly from the $80-million output of the peak year 1852, to $18 million in 1865. In the eight-year period 1852 to 1860, the population of Nevada County decreased from 21,000 to 16,450.

Agriculture began in the Yuba-Bear Rivers Hydrographic Unit early in the history of the area because many of the miners were better farmers than miners, and, soon tiring of their

inability to find gold, resorted to farming to supply the miners with food. In 1852 the Nevada County Assessor reported that 1,587 acres were under cultivation, and that during that year this acreage produced 14,310 bushels of barley, 307 bushels of oats, 299 tons of potatoes, and 50 tons of hay. The assessor's records for this period also show there were horses; mules; horned cattle, including work animals such as oxen; hogs; and poultry being raised in the county. The growth of agriculture in the early days, as reported in the assessor's report for other years, is shown by the fact that the number of fruit trees increased from about 3,200 to about 50,000 in the five-year period from 1855 to 1860. The total cultivated acreage in 1860 is reported to have been 30,000 acres This is a twenty-fold increase in about eight years. Although mining and population decreased after 1852, agriculture continued to increase until about 1880. The completion of the overland railroad and the depletion of the mines in Virginia City contributed to a decline in foothill agriclture at this time. With the cessation of hydraulic mining in 1884, a further decline in population and agriculture was brought about.

With the development of placer mining to a high degree, and the development of agriculture, many ditches were built to convey water from streams to the areas of use. Many ditches in use today were built in the 1850's to 1860's to support the mining industry and the growing agricultural lands. Some of these ditches, with their respective dates of construction, are Pine Grove Ditch, 1851; Newton Ditch, 1851;

Browns Valley
Ditch in
Browns Valley

Wise Powerhouse

Bear River Canal, 1852; Tunnel Ditch, 1852; Excelsior Ditch, 1859; China Ditch, 1860; Tarr Ditch, 1861; and the South Yuba Canal, the construction of which was started about 1855 and completed about 1865.

Since settlers of all types needed housing, the great influx of mining was conducive to the development of the lumber industry in the area. The first lumber mills were built in the vicinity of Grass Valley in the early spring of 1850. It is estimated that the mountains in the eastern portion of the hydrographic unit contain about 560,000 acres of commercial pine and fir timber lands, 55 percent of which are now in private ownership. The estimated sustained lumber yield is 33,000,000 board feet cut, with a 1957 dollar value of about $2,500,000.

Auburn, Grass Valley, and Nevada City, three of the principal cities of the hydrographic unit, had their beginnings in the gold rush days of the 1850's, and have continued in their relative prominence ever since. Many of the other early mining towns, such as Gold Run, Ophir, Gold Hill, Dutch Flat, Rough and Ready, North San Juan, Downieville, French Corral, Brown's Valley, and Smartville still exist, but only in a secondary role to their one-time glory. Other communities in the hydrographic unit are Rocklin, Loomis, Penryn, Newcastle, Weimar, Lincoln, Cisco Grove, and Soda Springs. Many of the towns that flourished during the mining days, but now are just memories, had quaint and unusual names such as Warloupa, Red Dog, New Town, Turkey Flat, Alpha, Omega, Timbuctoo and Sucker's Flat.

As has been previously noted, water development in the Yuba-Bear Rivers Hydrographic Unit began in 1850 with the construction of ditches to convey water to mining developments and to serve mining communities. Hydroelectric power production began in about 1897 with the construction of two small plants, one at Auburn and one at Newcastle, both of which have since ceased to operate. At present, 12 powerplants operate in the hydrographic unit, the oldest being the Alta Powerhouse, which was constructed in 1902. The other plants are Spaulding Powerhouses Nos. 1, 2, and 3; Drum Powerhouse; Dutch Flat Powerhouse; Halsey Powerhouse; Wise Powerhouse; Deer Creek Powerhouse; Colgate Powerhouse; Bullards Bar Powerhouse; and Narrows Powerhouse. All of the plants are operated by the Pacific Gas and Electric Company.

Other water projects within the area include those for agriculture which are operated by the Browns Valley Irrigation District, the Nevada Irrigation District, and the Pacific Gas and Electric Company. Detailed descriptions of these hydroelectric and agricultural facilities are contained in Appendix D.

The present development of ground water in the hydrographic unit is limited almost exclusively to domestic wells and to the water supply for Beale Air Force Base on the Sacramento Valley floor. Some of the surface water which flows from the hydrographic unit serves to recharge the ground water basin of the Sacramento Valley.

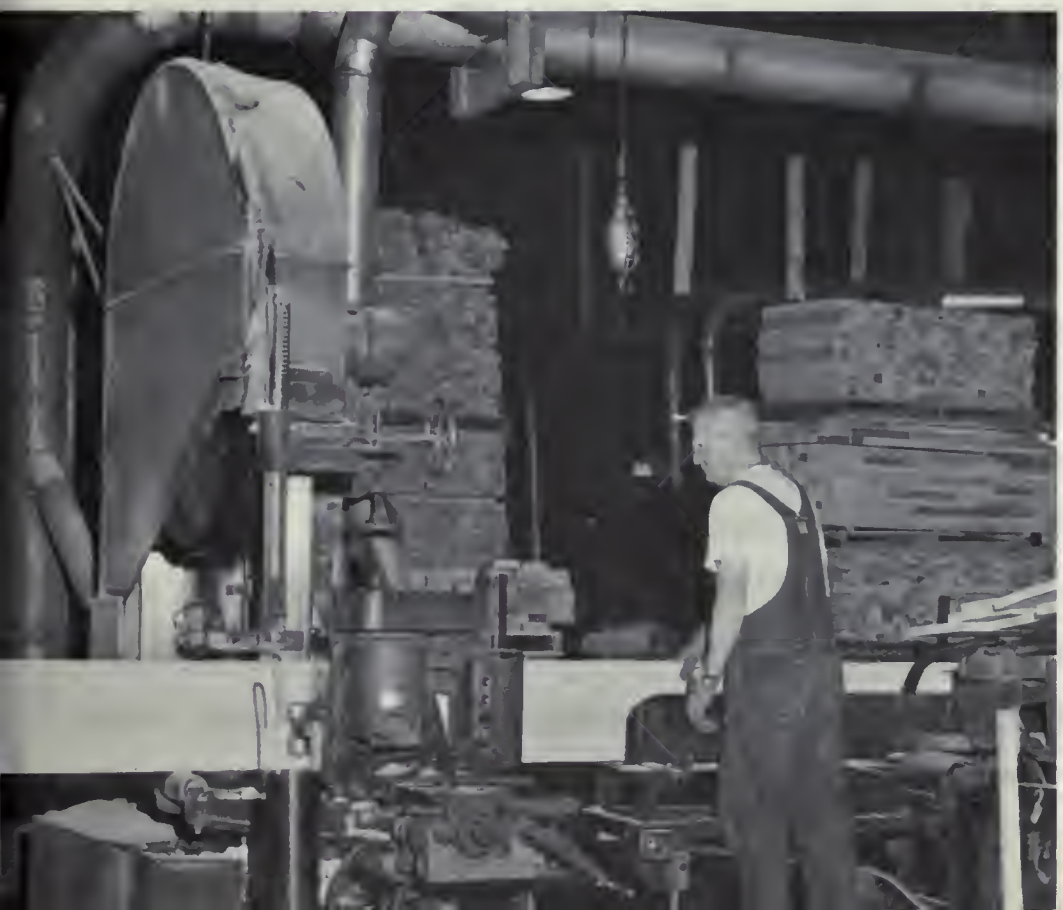
Recreational pursuits in the Yuba-Bear Rivers Hydrographic Unit have reached significant commercial proportions. There are many organizational and commercial campgrounds in addition to the many camping facilities operated by the U. S. Forest Service. Hunting, fishing, and winter sports in the area have led to development of summer and winter cabins in the national forests and on private lands. Water sports are popular recreational pursuits on the many lakes and reservoirs within the hydrographic unit.

The present (1960) population of the hydrographic unit is estimated to be 49,300. This is an increase of 22 percent over the 1950 population of 40,300. The distribution of the 1960 population by counties was: Placer County, 54 percent; Nevada County, 39 percent; and Sierra, Plumas and Yuba Counties, 7 percent. The present urban population of the unit is estimated to be 16,800.

Natural Features

Much of the terrain of the Yuba-Bear Rivers Hydrographic Unit is mountainous. Valley and foothill lands constitute only 5 percent and 35 percent, respectively, of the total area. The development of agricultural lands has been largely confined to those lands below an elevation of about 2,800 feet. There are, however, significant areas of wooded, less steeply sloping mountain lands at elevation above 5,000 feet which are suitable for recreational pursuits and mountain homes.

Lumber mill
near Woodleaf



Re-saw operation
in Cal-Ida Mill
near Auburn

The hydrographic unit includes parts of two major geomorphic provinces of California. The westerly portion of the unit below about 500 feet in elevation is in the Great Valley geomorphic province, while the remaining portion of the unit lies in the Sierra Nevada geomorphic province. The parent rock materials in the Great Valley geomorphic province are divided into three units: flood plains, low alluvial plains and fans, and dissected alluvial uplands. The dissected alluvial uplands consist of gently rolling terrain merging with the Sierra Nevada foothills on the east. Cutting across all of these deposits are the stream deposits of the Yuba and Bear Rivers.

The Sierra Nevada geomorphic province is developed on a tilted block, the eastern margin of which has been uplifted along a series of faults. The western flank or dip slope of the great fault block slopes from 120 to 180 feet per mile toward the west, and finally passes beneath the alluvial fill of the Sacramento Valley. The parent rock materials in this province are metamorphosed sediments and volcanics of probable Carboniferous age, together with granitic rocks which intruded into the metamorphosed rocks in upper Jurassic time. The granitic rocks are well exposed throughout the area. Overlying the granities and metamorphics in many places are Tertiary auriferous gravels and volcanics.

The Yuba-Bear Rivers Hydrographic Unit can be divided into three major topographic zones for the purpose of distinguishing between soil characteristics: (1) the valley zone, (2) the upland zone, and (3) the mountainous zone.

The valley zone, consisting of lands below about 500 feet in elevation, comprises a narrow band along the westerly edge of the hydrographic unit extending from just west of Penryn to near Sheridan. The valley zone also includes the lands in the western portion of Beale Air Force Base. The upland zone comprises those lands between elevations of 500 and 2,500 feet, and extends easterly from the valley zone to a line which extends from just north of Colfax to Nevada City and to Challenge. The mountainous zone comprises the lands above the upland zone to the crest of the Sierra Nevada.

The soils in the unit differ widely as to their age, their mode of formation, their parent rock material, and their environmental modification. The soils in the valley zone are of Recent and older alluvial origin, formed from the outwash material of the many streams transecting the area, and are characteristically quite mixed as to their parent rock material. The surface of the Recent alluvials is very smooth, while that of the older hardpan is gently undulating. Much of the older alluvial fill-type soils have been dredged by gold dredges, with the resulting jumbled piles of loose water-polished rock which make these areas unsuitable for irrigation development. However, some of the dredger tailings areas have been leveled and top soil has been added to create irrigable soils. The Recent alluvial soils are characterized by coarse-textured soils having little or no agricultural development. In contrast to these, the older alluvial soils are fine-textured and are more agriculturally developed than

the older valley fill clay pans and hardpans. The uniformity of this alluvial belt is broken by an area of very shallow and rocky soils which exists along the easterly portion of the land between Roseville and Lincoln. In this area the soils, which are extremely rocky and generally have a depth of less than 1 foot, were formed over the remnant of an ancient tuffaceous volcanic mudflow, and for the most part are not suited for agricultural development.

In the upland zone the soils are primarily residual soils which were derived from basic igneous and metavolcanic parent rock material. Much of the irrigable land in the hydrographic unit that has been classified as being rocky (see Chapter IV) is located along the western portion of this zone.

The major soil bodies in the mountainous zone are restricted to the tops of several long, rather gently sloping finger-like ridges. In addition there are a few scattered parcels of Recent alluvial soils found in rather isolated valleys. Soils in the mountainous zone are deep, rather rocky, having a reddish-brown color, and are clay-loam in texture.

In addition to the three major zones, a small area between the valley and upland zones in the southern portion of the unit may be designated as an intermediate zone. This zone is located in the Loomis-Auburn area and extends from Folsom Lake in a northwesterly direction through Penryn to the Gold Hill region.

The intermediate zone contains primarily residual soils formed from a granitic parent rock material, with many large granitic outcroppings being well exposed throughout the zone. The soils are characterized by being rather sandy and pliable at the surface, gradually grading into clay-loam subsoils with deptsh of 3 to 4 feet, even in close proximity to rock outcroppings. The drainage of these soils depends almost entirely upon the surface slope. This condition leads to ponding in draws or depressions, while the sloping soils drain quite rapidly.

Climate

The climate of the Yuba-Bear Rivers Hydrographic Unit is characterized by long, dry summers and cool, rainy winters. About 90 percent of the precipitation occurs during the period from November through March. There is some summer thundershower activity at the higher elevations, but the total precipitation from these storms constitutes only about 3 percent of the seasonal total. At the higher elevations most of the precipitation occurs as snow, the average snowline elevation being 4,800 feet on April 1 of the average year. The general precipitation pattern in the unit increases from west to east with increasing elevation, to a maximum somewhat west of the crest of the Sierra Nevada.

The topographic zones used to describe soils are also helpful in describing the topographic features which influence the variation in precipitation. In the valley zone

such topographic features are confined almost entirely to changes in elevation. The average seasonal precipitation in this zone varies from 23 inches to 28 inches, with an overall average of about 26 inches. Other than changes in elevation, the first local orographic effects which cause variations in precipitation are notices in the upland zone. In this zone some funneling of storms occurs in the steeper stream channels. The average seasonal precipitation is 46 inches, and the variation in average seasonal precipitation in the zone is from 24 inches at the lower elevations to 73 inches at the higher. The local orographic effects vary the greatest in the mountainous zone of the hydrographic unit. The average seasonal precipitation in this zone is 63 inches, with a variation in average seasonal precipitation of from 42 inches to 83 inches. Precipitation in the mountainous zone occurs both as rain and snow.

Several long-record precipitation stations are located within the unit. Table 2 shows the mean annual precipitation based on, or corrected to, the period 1905-1955, and the corresponding elevation at selected stations.

TABLE 2

MEAN* ANNUAL PRECIPITATION
AT SELECTED STATIONS
IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Station	Elevation	Precipitation (in inches)	Period of record
Rocklin	239	22.74	1896-1963
Auburn	1,297	34.80	1870-1963
Colfax	2,418	45.59	1870-1963
Grass Valley	2,693	53.25	1872-1963
Camptonville Ranger Station	2,745	60.42	1907-1963
Downieville Ranger Station	2,895	60.84	1908-1963
Deer Creek Powerhouse	3,700	66.95	1907-1963
Blue Canyon	4,750	59.50	1899-1963
Cisco Ranger Station	5,739	64.51	1870-1963
Norden Summit	7,017	45.49	1878-1926

*Mean period 1905-1955. "Mean period" is a period which is believed to represent conditions of water supply and climate over a long period of time.

Records indicate a wide variation of temperature within the Yuba-Bear Rivers Hydrographic Unit. The maximum recorded temperature is 118° F. and the minimum is -28° F. The mean annual temperatures in the hydrographic unit decrease somewhat with increasing elevation. The mean annual temperatures in the valley, upland, and mountainous zones are estimated to be 61°, 57°, and 49° F., respectively. Table 3 presents temperature data and corresponding elevations at selected stations in and near the Yuba-Bear Rivers Hydrographic Unit.

TABLE 3

SUMMARY OF RECORDED TEMPERATURES
AT SELECTED STATIONS IN OR NEAR THE
YUBA BEAR RIVERS HYDROGRAPHIC UNIT

Station	Elevation in feet	Temperature-degrees F.*			Average frost-free period in days	Period of record
		Average minimum	Average maximum	Annual average		
Marysville	62	48.8	75.7	61.7	284**	1934-1963
Rocklin	239	45.6	75.0	60.3	234**	1932-1963
Auburn	1,297	47.2	73.5	60.5	271**	1933-1963
Dobbins-Colgate	1,550	46.8	73.7	60.8	255***	1934-1963
Colfax	2,418	45.8	71.1	58.8	225**	1932-1963
Nevada City	2,500	36.8	70.1	53.5	143***	1932-1963
Grass Valley	2,693	47.6	71.8	59.7	240**	1932-1963
Downieville Ranger Station	2,895	36.6	68.8	52.5	140***	1934-1963
Deer Creek	3,700	36.9	64.2	50.3	133**	1932-1963
Lake Spaulding	5,156	33.4	61.4	47.7	101**	1932-1963
Blue Canyon	5,280	38.3	62.2	50.3	144***	1940-1963
Bowman Dam	5,347	38.3	60.8	49.6	137***	1934-1963

*Based on period from first year of record to 1959.
**Average for period 1924-1950.
***Average for period 1948-1958.

The frost-free period shown in Table 3 represents the average period, in days, between the last day in spring and the first day in fall when the daily minimum temperature fell below 32 degrees Fahrenheit.

Water Resources

Since the Yuba River heads near the crest of the Sierra Nevada, flow in the river is extended into the summer beyond the main precipitation period by melting of the high elevation snowpack. Long-term records of runoff have been obtained for about 90 percent of the Yuba River drainage in the hydrographic unit

from the stream gaging stations "Yuba River Near Smartville," for the period 1903 to 1941; and "Yuba River at Englebright Dam", and "Deer Creek near Smartville," combined, for the period 1941 to 1958. The Yuba River contributes an average of about 86 percent of the total runoff from the hydrographic unit.

The Bear River, with less than 1 percent of its drainage area above the 5,000-foot elevation where the snowpack occurs, depends largely on storage water and imported water for its summer flow. Long-term records of the runoff from Bear River were determined by using the records of the stream gaging station "Bear River at Van Trent" for the period 1904-1927, and by adding the quantities of water diverted by the Camp Far West Irrigation District to recorded runoff at the station "Bear River near Wheatland" for the period 1929 to 1959. The Bear River contributes about 14 percent of the total runoff from the hydrographic unit.

Pertinent information synthesized from records of the two rivers are summarized in Table 4 and 5 to indicate the general characteristics of runoff in the unit. The amounts reported are the measured runoff and do not include amounts diverted from the streams within the hydrographic unit.

TABLE 4

RECORDED RUNOFF
BEAR RIVER NEAR UNIT BOUNDARY

Period	Annual runoff: in acre-feet	Annual runoff: in percent of average	Discharge, cubic feet per second
Average runoff for period of record, 1904-05 through 1957-58 less 1928 and 1929 years	338,700	100	--
Runoff in minimum year of record, 1923-24	23,100	7	--
Runoff in maximum year of record, 1906-07	725,400	214	--
Runoff in driest 6-month period of record, May through October 1924	2,940	--	--
Runoff in wettest 6-month period of record November 1906 through April 1907	672,200	--	--
Maximum recorded instantaneous flow, December 22, 1955	--	--	33,000
Runoff in the maximum month of record January 1909	295,500	--	--
Runoff in 1956-57 water year (Oct 1-Sept 30)	228,100	67	--
Runoff in 1957-58 water year (Oct 1-Sept 30)	497,900	147	--

TABLE 5

RECORDED RUNOFF
YUBA RIVER NEAR UNIT BOUNDARY

Period	Annual Runoff		Discharge,
	in acre-feet	in percent of average	cubic feet per second
Average runoff for period of record, 1903-04 through 1957-58	2,109,200	100	--
Runoff in minimum year of record, 1930-31	429,300	20	--
Runoff in maximum year of record, 1906-07	4,465,600	212	--
Runoff in driest 6-month period of record, June through November 1931	91,600	--	--
Runoff in wettest 6-month period of record, January through June 1907	2,875,900	--	--
Maximum recorded instantaneous flow, December 23, 1955	--	--	159,300
Runoff in maximum month, January 1909	1,415,800	--	--
Runoff in 1956-57 water year (Oct 1-Sept 30)	1,544,100	73	--
Runoff in 1957-58 water year (Oct 1-Sept 30)	3,015,100	143	--

It is of interest to note that, on the average, 84 percent of the runoff of the Yuba River occurs between January and June, and 85 percent of the Bear River runoff occurs between December and April. Runoff of the Yuba River in the maximum month exceeded the total annual flow in 16 of the 55 years of record. Similarly, runoff of the Bear River in the maximum month exceeded the total annual flow in 24 of the 52 years of record.

From June through October 1957, the critical period of use during which most of the diversions from this unit were measured, runoff from the Yuba River totaled approximately 90 percent of the long-term average for this five-month period. During the month of May 1957, 398,780 acre-feet feet of runoff were recorded. This flow exceeded the flow in May during 32 of the 55 years of record. Similarly, runoff for the month of June through October 1957 exceeded the flow in the corresponding months in 28, 31, 48, 46, and 49 years, respectively, of the total 55 years of record.

Several of the diversions in the unit were measured during the period June through October 1958. During this period Yuba River runoff totaled approximately 160 percent of the long-term average for this five-month period. Runoff recorded for the months May through October 1958 exceeded the flow in corresponding months in 51, 47, 42, 50, 52, and 43 years, respectively, of the 55 years of record.

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Englebright
Reservoir

For the Bear River, somewhat lower flows occurred in 1957 with respect to the long-term average, while above average flows occurred during 1958. For 1957 the runoff totaled approximately 70 percent of the 52-year average, while for 1958 runoff totaled approximately 140 percent of the average.

Local Public Agencies Concerned with Water Development

Public agencies concerned with water development in the Yuba-Bear Rivers Hydrographic Unit include county water agencies, which are mainly planning and advisory agencies, irrigation districts, and urban water supply agencies.

The Nevada County Water Resources Committee, Placer County Water Agency, and Yuba County Water Agency represent the water development agencies of the counties within this hydrographic unit. These committees and agencies represent their respective county boards of supervisors. Their major duty is the development and coordination of water development projects.

There are two irrigation districts within the unit, Browns Valley Irrigation District and Nevada Irrigation District. The Nevada Irrigation District is contained entirely within the hydrographic unit, while a large part of the Browns Valley Irrigation District is outside the unit. Other public agencies which are designed to serve agricultural interests are San Juan Ridge County Water District, French Corral County Water District, and Yuba County Water Distri

Urban water supply agencies within the unit include municipal water departments, local county water districts, a local public utility district, and a California Water District. Principal municipal water departments are located at Grass Valley, Nevada City, and Lincoln. County water districts serving municipal or domestic water supplies are located at La Porte and Alleghany. The local public utility district is the Downieville Public Utility District, serving the community of Downieville; and the California Water District is the La Porte Water District.

Agencies that are presently active in the development of water projects in the unit are Placer County Water Agency, Yuba County Water Agency, Nevada Irrigation District, Yuba County Water District, and Browns Valley Irrigation District. The Placer County Water Agency is presently in the advanced planning stages, with bonds having been approved by the voters, for the development of American River water for use in western Placer County on lands below approximately 400 feet in elevation. The Yuba County Water Agency is also in the advanced planning stages, with bonds having been approved by the voters, for the construction of New Bullards Bar Reservoir, which would inundate the present Bullards Bar Dam. Use of this water will be in the Sacramento Valley outside of the Yuba-Bear Rivers Hydrographic Unit. The Nevada Irrigation District has plans that have been approved by the voters for the development of additional storage facilities on the Middle and South Yuba Rivers above Milton and Bowman

Reservoirs; Rollins Reservoir on the Bear River; two powerhouses on the Bear River between Dutch Flat and Rollins Reservoir; and the enlargement of Scotts Flat Reservoir. The Yuba-County Water District has preliminary plans for a reservoir at New York Flat on Dry Creek for service in the Dobbins area, and Browns Valley Irrigation District is now constructing a reservoir on Dry Creek near Virginia Ranch for additional supply to its service area.

Water facilities are also being developed by the Oroville-Wyandotte Irrigation District and South Sutter Water District for export from the hydrographic unit. Oroville-Wyandotte Irrigation District has completed construction on a reservoir and diversion facilities on Slate Creek for diversion to its water system in the Feater River watershed. South Sutter Water District is presently enlarging the dam on Bear River at Camp Far West Reservoir for additional storage and supply for its irrigation system, and for a more dependable supply for Camp Far West Irrigation District's irrigation system.

CHAPTER II. WATER USE

Present water requirements in the Yuba-Bear Rivers Hydrographic Unit are met almost entirely by diversions of surface runoff. For this investigation a survey was made of the systems established for the diversion of streamflow. Survey data reported herein include locations and descriptions of diversions, uses, amounts of water diverted, and information on apparent water rights relating to diversions. Diversions of water for all purposes are reported except those involving less than approximately 10 acre-feet per season, such as diversions by individual domestic users.

Quantities of water diverted were measured in order to further describe the diversion systems. The measured quantities do not necessarily represent average diversions, since in any single year the quantity will be influenced by precipitation and available streamflow during the growing season. As stated in Chapter I, runoff from the Yuba and Bear Rivers during the summer of 1957 was slightly below average, and during the summer of 1958 it was about one and one-half times the average. Considerations other than available water supply, such as economic factors, may also affect the relation of any diversion record to typical operating conditions. No attempt was made herein to assess these factors. The diversion quantities reported herein generally represent the actual amounts of water taken from the respective sources, and therefore include recoverable and irrecoverable losses incidental to the primary use.

The location of water wells and the measurement of their production were not covered in this investigation. However, the areas of lands irrigated by water from all sources were determined and are reported in Chapter III. Consumptive use of water was estimated in selected areas, and the results are presented later in this chapter.

The majority of the urban water service in the unit is supplied either by Pacific Gas and Electric Company or Nevada Irrigation District. Areas not receiving water from these suppliers are served by either small water service agencies, individual diversions of surface water, or individual water wells.

Urban areas receiving supplies from Pacific Gas and Electric Company and Nevada Irrigation District are in the following localities:

Pacific Gas and Electric Company

Location	Delivery made to	Primary source
Alta	Individual water users	Boardman Canal System
Auburn1/	Individual water users	Boardman Canal System
	Morgan Tract Water Users Assn.	Boardman Canal System
	Oak Ridge Mutual Water Co.	Boardman Canal System
Bowman	Individual water users	Bear River Canal "
Dutch Flat	Dutch Flat Water Works	Boardman Canal System
	Nichols System	Boardman Canal System
	Dutch Flat Developers	Boardman Canal System
Gold Run	Individual water users	Boardman Canal System
Hidden Valley	Hidden Valley Water Co.	Boardman Canal System
Lincoln	Lincoln Municipal Water Dept.	Bear River Canal "
Loomis	Individual water users	Boardman Canal System
	Golden Hills Water Company	Boardman Canal System
Meadow Vista	Meadow Vista Water Users	Boardman Canal System
Newcastle	Individual water users	Boardman Canal System
Penryn	Individual water users	Bear River Canal "
Rocklin	Individual water users	Boardman Canal System
Shady Glen	Individual water users	Boardman Canal System

Nevada Irrigation District

Location	Delivery made to	Primary source
Auburn[2]	Individual water users	Gold Hill Canal & water delivered from PG&E
Bear River Pines	Individual water users	Cascade Canal
Glenbrook[3]	Individual water users	D-S Canal
Grass Valley	Grass Valley Municipal Water Department	D-S Canal
Grass Valley[4]	Individual water users	D-S Canal
Nevada City[5]	Nevada City Municipal Water Department	Snow Mountain Ditch
Nevada City[6]	Individual water users	D-S Canal and Snow Mountain Ditch
Newtown	Individual water users	Newtown Ditch
Ophir	Individual water users	Gold Hill Canal
Rough and Ready	Individual water users	Rough and Ready Ditch
Smartville	Individual water users	China Ditch

1/ Includes urban areas in the vicinity of Auburn and between Auburn and Colfax along Highway 40 that are outside Nevada Irrigation District.
2/ Includes only the suburbs to the north of Auburn that are inside Nevada Irrigation District.
3/ Includes urban areas in vicinity of Glenbrook.
4/ Includes only outlying suburbs of Grass Valley.
5/ Does not include total water supply of city.
6/ Includes only outlying suburbs of Nevada City.

Urban water service, other than that of Pacific Gas and Electric Company and Nevada Irrigation District, is provided in the following localities:

Location	Supplier	Source
Alleghany	Alleghany County Water District	Springs tributary to Kanaka Creek
Beale Air Force Base	U. S. Air Force	Ground water
Browns Valley	Browns Valley Irrigation District	North Yuba River
Camptonville	Camptonville Water Service	Campbell Gulch
Challenge	Harry Mulock	Tributary to Golden Gate Ravine

Location	Supplier	Source
Dobbins	E. A. Ingersoll	Spring tributary to Dobbins Creek
Downieville	Downieville Public Utility District	Downie River and Pauley Creek
French Corral	Minona Mining Company[1/]	Shady Creek
Graniteville	Graniteville Water Works	Poorman Creek
La Porte	La Porte Water District	Springs tributary to Rabbit Creek
Nevada City[2/]	Nevada City Water Dept.	Little Deer Creek
North Bloomfield	North Bloomfield Community System	Humbug Creek
Strawberry Valley	Soper-Wheeler Company	Sly Creek (Feather River Hydrographi Unit)
Washington	Washington Water Supply	Canyon Creek

1/ System leased and operated by French Corral County Water District.
2/ Serves only portion of city.

Water Rights

Water rights are an important consideration in the determination of availability of waters which are surplus to the present and future needs of an area wherein the waters originate. Data were therefore obtained with respect to apparent water rights in connection with the surface water diversions described herein. These rights may be based on appropriation or on riparian status, and may have been defined by adjudication proceedings. The California law of water rights, including both surface and underground water, is described briefly in Appendix C.

Most of the water use in the Yuba-Bear Rivers Hydrographic Unit is based on appropriative rights established since 1914. As of May 29, 1959, a total of 470 currently valid

applications had been made in the unit under the provisions of the Water Commission Act of 1914. Permits or licenses had been granted for 392 of these applications, 52 were pending with the State Water Rights Board, and 26 were incomplete as of that date. All the applications are tabulated in Appendix C, Table C-1.

Water rights are rights in property which, because of their often obscure establishment, are frequently the subject of controversy and litigation. In the Yuba-Bear Rivers Hydrographic Unit only one major suit has taken place and, as a result, six diversions reported herein divert under an adjudicated water right. This action is further described in Appendix C.

Surface Water Diversions

An attempt was made during the survey to locate and obtain data with respect to all diversions of more than 10 acre-feet per year. All diversions actually in use in 1957, plus those which had been used within the preceding five years, were included. The date of last use, if known, is recorded for such discontinued diversion. Direct diversions, as well as those involving significant surface storage, were located. All reservoirs which had surface areas of about three acres or more were mapped. Three acres is approximately the minimum area which can be determined with reasonable accuracy by the methods utilized. Reservoirs located along and operated in conjunction with canals and

ditches are shown on the land and water use maps, but are not considered as separate systems and are not assigned location numbers. Similarly, water supplies obtained from small intermittent streams intercepted by canal systems, which add to the primary diverted supply, are not classed as separate diversions.

In some situations water users have made efficient use of water by rediverting field runoff or spill collected from their own upstream diversion systems. In this investigation, such points of rediversion are neither located on the maps nor assigned numbers. If return flow from another water user's operation is rediverted,or if there is doubt as to the origin of the water, the diversion is delineated and assigned a number. Diversion systems of water companies or groups of water users are considered as single units; individual customer distribution points are not shown on the maps.

In situations where a water-serving agency sells water to an individual by releasing to a stream channel for rediversion below, the individual's diversion was considered as a separate diversion if water in addition to the purchased water was diverted. These diversions were measured and the amounts diverted are reported as either including or not including the water puchased from the water agency.

There were 374 diversions of surface water located in the unit in 1957. These are classified by primary use as follows:

Primary use	Number of diversions
Irrigation and/or stockwatering	275
Hydroelectric power production	42
Mining	15
Urban water supply	12
Recreation	11
Domestic	9
Industrial	7
Debris control	1
Export for irrigation outside of unit	2
Total	374

Many of these diversions have multiple uses but are listed under what is considered their primary use. For example, Nevada Irrigation District and Pacific Gas and Electric Company diversion systems delivering water to Lake Spaulding are all considered as power diversions, while their diversions further downstream are considered as being for irrrigation, although most are used also for domestic, municipal, and mining purposes.

Points of diversion and main canals or pipelines used to convey water from them are delineated on the 23 sheets of Plate 2, entitled "Land and Water Use." Nevada Irrigation District diversions are generally shown on sheets 1 and 2 of Plate 4, entitled "Water Supply System of Nevada Irrigation District." Pacific Gas and Electric Company diversions are generally shown on sheets 1 and 2 of Plate 5, entitled "Power and Water Supply Systems of Pacific Gas and Electric Company."

Numbering System for Surface Water Diversions

Surface water diversions are numbered to indicate their approximate location by township, range, and section within the federal land survey system. In this report, each section is subdivided into 40-acre plots, and the diversions are numbered within each of these 40-acre plots according to the order in which they were located. This system is illustrated on Plate 2. For example, diversion 16N/8E-14C1, which is shown on sheet 16 of Plate 2 labeled as "14C1," is the first diversion located in the northeast quarter of the northwest quarter of Section 14 in Township 16 North, Range 8 East, Mt. Diablo Base and Meridian (MDB&M).

Descriptions of Surface Water Diversions

Descriptions, history, and other information relating to surface water diversions were obtained by field inspection, by interview with water users or their representatives, and by reference to prior reports and official records. This information is summarized in Table 6. Data in the table are arranged by diversion location number within each subunit.

The purpose of each diversion, the amount of water diverted during part or all of the years 1957 and 1958 where measurements or estimates were available, the extent of use in 1957, such as the number of acres irrigated, and the method of application of water are described in Table 6. If the purpose listed is not the usual use for that diversion, notation is made in the remarks column. The extent of domestic use is

version 17/6E-4H1
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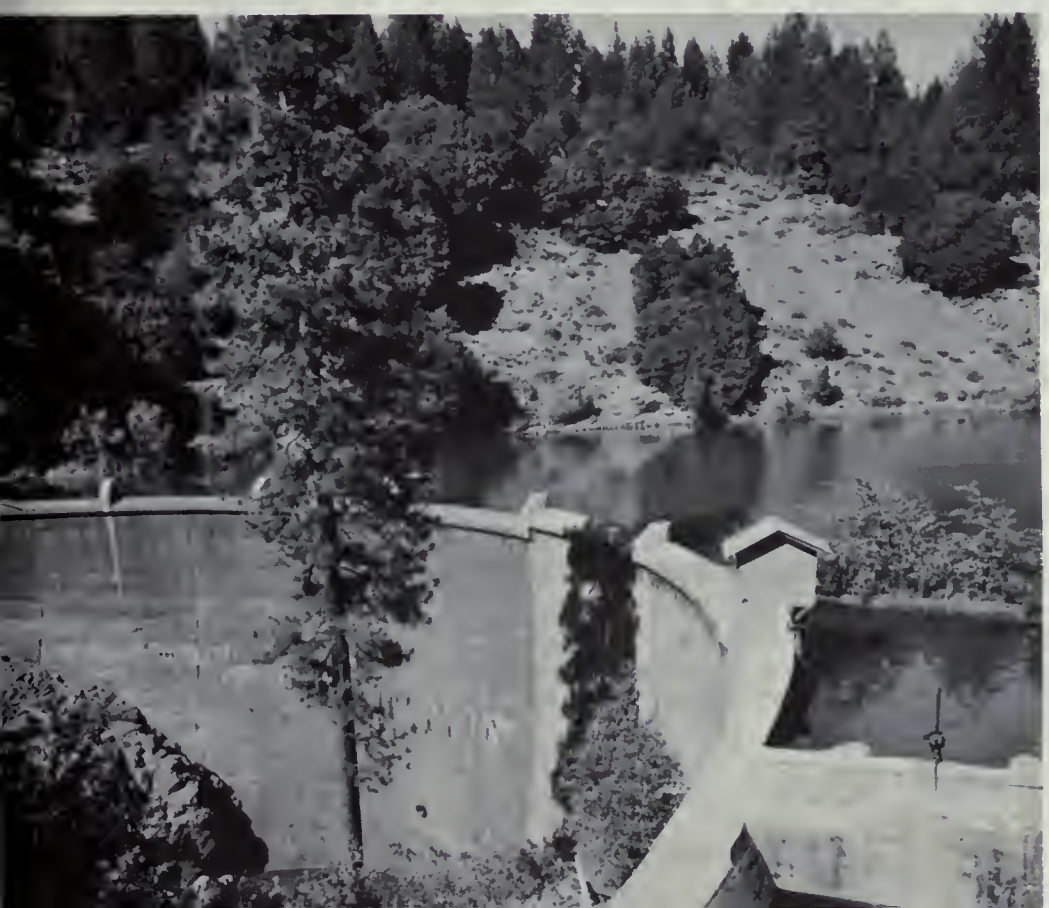

Deer Creek
Reservoir and
intake of
D-S Canal

specified only when five or more connections are served. Stock-watering of less than 10 head of livestock is considered to be a domestic use. The extent of irrigation use is based on the land use survey described in Chapter III.

Detailed descriptions of the diversion systems, including dams, pumps, and main conduits, as well as any special features, are included in Table 6. The diversions are classified in the table as gravity, pump, and storage, according to the following descriptions:

> Gravity diversion - A system in which water is taken from its natural course at a diversion structure and conveyed by gravity through a canal or pipeline to the area of use. Such a diversion may have a reservoir on the stream, but the capacity is small compared with the amount of water diverted, and provides no significant carryover storage from winter to summer.
>
> Pump diversion - A system in which water is pumped from its natural course through a pipeline to the area of use or to a gravity conduit located at a higher elevation.
>
> Storage diversion - A system consisting of or including a surface reservoir having significant carryover storage within each season or from season to season.

Systems not exclusively of one of these basic types are listed as combinations of those types which best describe them.

The type of water right under which the respective diversions are considered to be made is indicated in Table 6 as the "apparent water right." The determination of this item is based upon the best information available from the owner, from files of the State Water Rights Board, from court decrees and other official records, or from other sources.

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M						Alleghany Subunit					
18N/10E-3C1 (Sheet 10)	Original 16 to 1 Mine, Inc.	Buckeye Ravine	Mining Milling Fire prot.	Hard rock mine* Ore processing	Not meas.	Approp.*	1 cfs	A-481[a]	1856	Gravity; earth and timber dam with 0.1 mile of 6-inch pipe.	Mill received supplemental supply from 19N/10E-34N1. Apropriative water right includes amount that may be diverted by 18N/10E-3C2.
18N/10E-3C2 (Sheet 10)	Original 16 to 1 Mine, Inc.	Buckeye Ravine	Mining Milling Fire prot.	Hard rock mine* Ore processing	Not meas.	Approp.*	1 cfs	A-481[a]	1856	Gravity; small dam with 0.2 mile of 6-inch pipe.	Mill received supplemental supply from 19N/10E-34N1. Water right includes amount that may be diverted by 18N/10E-3C1.
19N/10E-34B1 (Sheet 7)	Alleghany Water District	Spring tributary to Red Star Ravine	Munic.	350 persons*	Not meas.	Approp.	0.45 cfs	A-16725[a]	1944	Pump; 5-hp electric motor with 0.8 mile of 4-inch pipe and two 10,000-gallon storage tanks.	Supplies community of Alleghany. Received supplemental supply from 19N/10W-34N2.
19N/10E-34N1 (Sheet 7)	Original 16 to 1 Mine, Inc.	Springs tributary to Buckeye Ravine	Domestic Mining	30 persons (*)	Not meas.*	Apnrop.	0.5 cfs	A-1193[a]	1856	Pump; hydraulic ram with 0.2 mile of 6-inch pipe to connection with 19N/10E-34B1.	Former owner: Buckeye Placer Claim. Portion of amount diverted used to supplement 18N/10E-3C1 and 18N/10E-3C2.
19N/10E-34N2 (Sheet 7)	Alleghany Water District	Springs tributary to Buckeye Ravine	Munic.	(*)	Not meas.*	Approp.	--	--	Prior 1908	Pump; hydraulic ram with 0.4 mile of 4-inch pipe.	Former owner: Buckeye Placer Claim. Amount diverted used to supplement 19N/10E-34B1.
19N/12E-12N1 (Sheet 8)	Milton-Bowman Tunnel (Milton Reservoir) Nevada Irrigation District	Middle Yuba River	Irrig. Mining Domestic Power	(*)	69,527*	Approp. Approp.	400 cfs 75,000 af 400 cfs 75,000 af	A-2275[a] A-2276[a]	1928	Gravity and storage; concrete constant radius arch dam 32 feet high, 286 feet long, with a 270-acre-foot reservoir and 4.8 miles of pipeline and tunnel to 18N/12E-8C1 (Bowman Lake).	Diversion amount reported includes all water diverted by 19N/12E-14F1 and 19N/12E-14H1. Combined supply used to supplement 18N/12E-8C1 (Donner Pass Subunit).**
19N/12E-14F1 (Sheet 8)	Nevada Irrigation District	Poison Creek	(*)	(*)	(*)	Approp. Approp.	25 cfs 3,000 af 25 cfs 3,000 af	A-8177[a] A-8179[a]	1934	Gravity; small rock dam with 0.4 mile of earth ditch to connection with 19N/12E-12N1 (Milton-Bowman Tunnel).	Amount diverted and details of use reported under 19N/12E-12N1.**
19N/12E-14H1 (Sheet 8)	Nevada Irrigation District	Wilson Creek	(*)	(*)	(*)	Approp. Approp.	25 cfs 3,000 af 25 cfs 3,000 af	A-8177[a] A-8179[a]	1934	Gravity; rock dam 2 feet high, 10 feet long, with 0.3 mile of earth ditch to connection with 19N/12E-12N1 (Milton-Bowman Tunnel).	Amount diverted and details of use reported under 19N/12E-12N1.**
19N/13E-20A1 (Sheet 8)	Jesse Ennor	Pass Creek	Irrig.	63 acres by flooding	Not meas.	Approp.	0.87 cfs	A-1143[a]	1918	Gravity; log dam 4 feet high, 25 feet long, with 0.8 mile of earth ditch.	

* See remarks.
** For additional information see Appendix D, "Detailed Descriptions of Certain Surface Water Diversions".
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Auburn Ravine Subunit						
12N/6E-2H1 (Sheet 22)	Adrian Guiliford	Markham Ravine	Irrig. Stock.	35 acres by flooding and sprinkler* 60 head	Not meas.	(b)	--	--	About 1910	Gravity; concrete dam 4 feet high, with 0.6 mile of earth ditch.	Former owner: C. E. Guiliford. Area irrigated received supplemental water purchased from Nevada Irrigation District. Reported area irrigated is located in Coon Creek Subunit.
12N/6E-12C1 (Sheet 22)	Walter S. and Annie E. Griffing*	Tributary to Markham Ravine	Irrig. Stock.	25 acres by sprinkler* -	Not meas.	Approp.	0.075 cfs 1.15 af	A-13740[a]	1950	Pump; 10-hp electric motor with 0.2 mile of 6-inch pipe.	Former owner: Alexander E. Buck. Ownership changed to R. E. Woodward in May 1957. Area irrigated received supplemental water purchased from Nevada Irrigation District.
12N/6E-12K1 (Sheet 22)	W. D. and Bertha Byers	Tributary to Auburn Ravine	Irrig. Stock.	35 acres by sprinkler and flooding* 60 head	Not meas.	Approp.	0.2 cfs	A-13542[a]	About 1945	Pump; earth dam 6 feet high, 20 feet long, and a 20-hp electric motor with short 6-inch pipeline.	Former owners: Annie and George Daniels. Area irrigated received supplemental water purchased from Nevada Irrigation District.
12N/6E-13A1 (Sheet 22)	Hemphill Ditch Mrs. S. Amodei Mrs. Forsyths Mrs. E. H. Lewis Nevada Irrigation District	Auburn Ravine	Irrig. Stock.	331 acres by flooding* 60 head	896	Approp. Approp.*	8 cfs 50 MI	A-6529*,[a]	About 1854	Gravity; earth dam 4 feet high, 50 feet long, with 3.8 miles of earth ditch.	Former owners: Wyman and Walkup. Irrigated an additional 115 acres by flooding until 1957. Portion of reported areas irrigated located in Orchard-Pleasant Grove Creeks Subunit. Water right application No. 6529 in name of Nevada Irrigation District. Appropriative water right for 50 MI was established prior to 1914 and is held by Mrs. S. Amodei, Mrs. Forsythe, and Mrs. E. H. Lewis.
12N/7E-9P1 (Sheet 22)	Miss Ethel Mulligan	Auburn Ravine	Irrig. Domestic Stock.	11 acres by furrow (c) 240 head	11	Approp.	0.15 cfs	A-4597[a]	1925	Pump; 7.5-hp electric motor directly connected to distribution system.	Former owner: California Trust Company.
12N/7E-13G1 (Sheet 22)	Charles A. Ruestis	Auburn Ravine	Irrig. Poultry Recr.	27 acres by sprinkler 10,000 turkeys Fishing	188*	Approp.	16 MI	Book A Pg. 237[e]	About 1883	Gravity; concrete dam 3 feet high, 30 feet long, with 0.4 mile of 8-inch pipe and 1.3 miles of earth ditch.	Former owners: Phillip Huestis, C. Phillip Huestis. Reported amount diverted is for 1/1/57 - 9/20/57 only.
12N/7E-14A1 (Sheet 22)	Auburn Ravine Canal Nevada Irrigation District	Auburn Ravine*	Irrig. Stock. Domestic	(j) -- --	19,094*	Approp.	10 cfs	Deed	Prior 1917	Gravity; concrete dam 10 feet high, 90 feet long, with 18.5 miles of concrete-lined and earth canal.	Former owner: Pacific Gas and Electric Company. Stream flow of Auburn Ravine augmented by deliveries from Pacific Gas and Electric Company.** Reported amount diverted is for April 1957 - March 1958.
12N/7E-16H1 (Sheet 22)	Frank H. Newcomb	Tributary to Auburn Ravine	Irrig. Stock.	42 acres by flooding* 50 head	127*,[d]	Approp.	10 MI	Book A Pg. 454[e]	1903	Gravity and storage; earth dam 20 feet high, 200 feet long, with 0.5 mile of earth ditch.	Former owners: J. H. Bickford, E. W. Newcomb. Reported amount diverted is for 1/1/57 - 10/5/57 only. Area irrigated received supplemental water purchased from Nevada Irrigation District.

* See remarks.
** For additional information see Appendix D, "Detailed Descriptions of Certain Surface Water Diversions".
-- Information not available.
For lettered footnotes, see last page of table.

TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M				Auburn Ravine Subunit (Continued)							
12N/7E-17K1 (Sheet 22)	Howard A. and Tillie E. Grebin*	Grapevine Ravine	Stock. Recr.	(*) Fishing*	Not meas.	Approp.	20 af	A-15338[a]	About 1953	Storage; earth dam 10 feet high, 250 feet long.	Ownership changed to Henry Teichert in 1958. Former owner: G. F. Cane. Previously supplied 15 head of livestock. Received supplemental supply from 12N/7E-B1
12N/7E-18D1 (Sheet 22)	Frank E. Conley	Auburn Ravine	Irrig. Stock.	26 acres by flooding and sprinkler 45 head	131	Approp.	150 MI	Book B Pg. 379[e]	1909	Pump; 7.5-hp electric motor with 0.1 mile of 6-inch pipe.	Former owner: Peter Conley.
12N/7E-19A1 (Sheet 22)	Elmer A. and Mattis Van Dyke Johnson	Tributary to Auburn Ravine	Irrig. Stock.	34 acres by sprinkler and flooding* 75 head	50[d]	Approp.*	0.2 cfs 4.5 af	A-10751[a]	About 1940	Gravity and storage; earth dam 6 feet high, 150 feet long, with 0.4 mile of earth ditch and pipeline.	Former owners: Lyle, Nafakus, Fulwilder. Area irrigated received supplemental water purchased from Pacific Gas and Electric Company. Water right assigned to Elmer A. and Mattie Van Dyke Johnson and Martin A. and Cleo B. Maier in 1959.
12N/7E-20B1 (Sheet 22)	Pat Walters*	Grapevine Ravine	Irrig. Stock. Recr.	20 acres by sprinkler -- Fishing in reservoir	Not meas.	Approp.*	18 af	A-12040*,[a]	1948	Pump and storage; earth dam 27 feet high, 320 feet long, and a 3-hp electric-powered pump with 2-inch pipeline.	Former owners: G. F. Cane, W. C. Neuffer. Partial assignment of water right to Howard A. and Tillie E. Grebin to supplement 12N/7E-17K1.
12N/7E-21C1 (Sheet 22)	Ray and Lillian LaFaille	Badger Ravine	Irrig. Stock.	20 acres by flooding* 40 head	73*,[f]	Approp.	1.2 cfs 72 af	A-10012[a]	1957	Gravity and storage; earth dam 25 feet high, 275 feet long, 40 acre-foot reservoir, with three earth ditches having a total length of 1.0 mile.	Former owners: Phillip O'Brian, E. O. Price, Alvin Vereer. Area irrigated received supplemental water purchased from Pacific Gas and Electric Company. Reported amount diverted is for 5/1/57 - 9/27/57 only.
12N/7E-23D1 (Sheet 22)	Robert P. Rich	Dutch Ravine	Irrig. Stock.	42 acres by sprinkler and flooding 100 head	422	Approp.	30 MI	--	About 1870	Gravity; 1.3 miles of earth ditch.	Former owners: Fereva, Martindale, Martin.
12N/7E-23F1 (Sheet 22)	Paul and Elizabeth Ripley	Dutch Ravine	Irrig.	11 acres by sprinkler*	28[f]	Approp.	0.25 cfs	A-12944[a]	1951	Pump; 5-hp electric motor with 0.2 mile of 4-inch pipe.	Former owner: Joseph Zazzo. Area irrigated received supplemental water purchased from Pacific Gas and Electric Company.
12N/7E-23H1 (Sheet 22)	J. W. and Nellie E. Dieterich Joe Varni	Dutch Ravine	Irrig. Stock.	6 acres by sprinkler --	32	Approp.	0.18 cfs	A-15657[a]	1955	Pump; 10-hp electric motor directly connected to distribution system.	
12N/7E-24A1 (Sheet 22)	Merrill H. Carlton	Dutch Ravine	Irrig.	8 acres by furrow	206	Riparian	--	--	Prior 1914	Gravity; rock dam 2 feet high, 3 feet long, with 0.5 mile of earth ditch.	Former owners: Henriques, M. Silva.
12N/7E-24F1 (Sheet 22)	C. L. Dimmler	Dutch Ravine	Irrig. Stock.	13 acres by flooding and furrow 30 head	52	Riparian	--	--	About 1850	Gravity; concrete dam 4 feet high, 20 feet long, with 0.5 mile of earth ditch.	Former owner: Cory.
12N/8E-3F1 (Sheet 22)	George Boorinakis	Auburn Ravine	Irrig.	12 acres by flooding	15	Riparian	--	--	1924	Pump; 5-hp electric motor with 3.5-inch pipeline.	

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M				Auburn Ravine Subunit (Continued)							
12N/8E-4D1 (Sheet 22)	Jack Fanini	Tributary to North Ravine	Irrig. Stock.	15 acres by sprinkler and furrow* 25 head	Not meas.	Riparian	--	Deed	Prior 1914	Pumps; 2- and 5-hp electric motors with short 3-inch pipeline.	Former owner: Morgan. Area irrigated received supplemental supply from 12N/8E-4D2.
12N/8E-4D2 (Sheet 22)	Jack Fanini	Tributary to North Ravine	Irrig. Stock.	(*) --	Not meas.*	Riparian	--	Deed	Prior 1914	Gravity; earth and rock dam 5 feet high, 75 feet long, with a short earth ditch.	Former owner: Morgan. Amount diverted used to supplement 12N/8E-4D1.
12N/8E-5K1 (Sheet 22)	Milt Renfree	Tributary to North Ravine	Irrig. Stock. Domestic	14 acres by flooding 10 head (c)	118	Approp.	3 MI	--	Prior 1912	Gravity; concrete dam 3 feet high, 22 feet long, with 0.1 mile of 4-inch pipe.	Former owners: Orr, T. P. Shanley
12N/8E-7R1 (Sheet 22)	E. O. Salmon	Hughes Ravine	Irrig. Stock.	3 acres by flooding* 40 head	Not meas.	Approp.	20 MI	Book A Pg. 197[e]	About 1858	Gravity; small earth dam with 350 feet of earth ditch and 0.1 mile of 4-inch pipe.	Former owners: King, J. L. Salmon. Area irrigated received supplemental supply from 12N/8E-7R2 and from water purchased from Nevada Irrigation District.
12N/8E-7R2 (Sheet 22)	E. O. Salmon	Hughes Ravine	Irrig.	(*)	Not meas.*	Approp.	20 MI	Book A Pg. 197[e]	Prior 1914	Gravity; small wood dam with 400 feet of 4-inch pipe.	Former owners: King, J. L. Salmon. Amount diverted used to supplement 12N/8E-7R1.
12N/8E-10F1 (Sheet 22)	Everett M. Ludwig	Auburn Ravine	Irrig. Stock.	19 acres by sprinkler --	14	Riparian	--	--	1949	Pump; 7.5-hp electric motor with 200 feet of 4-inch pipe.	
12N/8E-16H1 (Sheet 22)	Frank P. Morath	Auburn Ravine	Irrig. Stock.	9 acres by sprinkler 50 head	Not meas.	Approp.	10 MI	Book B Pg. 424	1914	Gravity; 0.3 mile of 6-inch pipe.	Former owners: Kiessling, Dominic Morath.
12N/8E-17B1 (Sheet 22)	G. G. Johnson	North Ravine	Irrig.	12 acres by furrow	207	Riparian	--	--	Prior 1878	Gravity; rock dam with 0.6 mile of earth ditch.	Former owners: McCuen, Andrew Johnson.
12N/8E-17K1 (Sheet 22)	Iwami Nishimoto A. M. Amaral	Auburn Ravine	Irrig.	58 acres by furrow*	Not meas.	Approp.	0.024 cfs	A-3038[a]	Prior 1922	Gravity; rock and concrete dam 4 feet high, 20 feet long, with 1.7 miles of earth ditch.	Former owners: W. Kiessling, G. Ludwig, A. Oest, M. Ludwig. Area irrigated received supplemental supply from 12N/8E-17K2.
12N/8E-17K2 (Sheet 22)	Iwami Nishimoto A. M. Amaral	North Ravine	Irrig.	(*)	Not meas.*	(b)	--	--	Prior 1922	Gravity; 25 feet of earth ditch to connection with 12N/8E-17K1.	Amount diverted used to supplement 12N/8E-17K1.
12N/8E-18B1 (Sheet 22)	Jamison Ditch H. V. McDaniel	Hughes Ravine	Irrig.	5 acres by flooding	65	Approp.	10 MI	Book A Pg. 12[a]	1872	Gravity; rock dam with 0.2 mile of earth ditch.	Former owners: Henry Jamison, William Warner.
12N/8E-18C1 (Sheet 22)	Roland C. Lapp	Tributary to Auburn Ravine	Irrig.	4 acres by flooding	Not meas.	Riparian	--	--	About 1905	Gravity; earth dam 1 foot high, 6 feet long, with 0.2 mile of earth ditch.	Former owners: Jamison, Nois.
12N/8E-18G1 (Sheet 22)	Roland C. Lapp	Auburn Ravine	Irrig.	9 acres by flooding and furrow*	21[f]	Riparian	--	--	About 1905	Pump; 5-hp electric motor with a 4-inch pipeline.	Former owners: Jamison, Nois. Area irrigated received supplemental water purchased from Nevada Irrigation District and Pacific Gas and Electric Company.

* See remarks.
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-- Information not available.
For lettered footnotes, see last page of table.

TABLE 8 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Auburn Ravine Subunit (Continued)						
12N/8E-18L1 (Sheet 22)	Roland C. Lapp	Tributary to Auburn Ravine	Irrig. Stock. Recr.	3 acres by flooding -- Fishing in reservoir	Not meas.	(b)	--	--	1951	Gravity and storage; earth dam 25 feet high, 450 feet long, with 0.1 mile of earth ditch.	
12N/8E-18Q1 (Sheet 22)	Roland C. Lapp	Tributary to Auburn Ravine	Irrig.	6 acres by flooding	30	Riparian	--	--	About 1905	Gravity; small earth dam with 0.1 mile of earth ditch.	Former owners: Jamison, Noia.
12N/8E-18R1 (Sheet 22)	Roland C. Lapp	Tributary to Auburn Ravine	Irrig.	8 acres by flooding	3	Riparian	--	--	About 1905	Gravity; earth and timber dam 3 feet high, 10 feet long, with 0.2 mile of earth ditch.	Former owners: Jamison, Noia.
					Bullards Bar Subunit						
18N/7E-3J1 (Sheet 9)	Lloyd Williams Alex Moran	Tributary to Little Oregon Creek	(*)	(*)	(*)	Approp.	--	--	About 1854	Gravity; 0.1 mile of earth ditch.	Former owners: Andrew J. Edgar, James and Neeley McConnel, Doris, Henry, and Mary Skinner. Amount diverted and details of use reported under 18N/7E-3K1.
18N/7E-3K1 (Sheet 9)	Lloyd Williams Alex Moran	Tributary to Little Oregon Creek	Irrig. Domestic	14 acres by flooding (c)	245*	Approp.	--	--	About 1854	Gravity; direct diversion with 1.0 mile of earth ditch and wood flume.	Former owners: Andrew J. Edgar, James and Neeley McConnel, Doris, Henry, and Mary Skinner. Reported amount diverted includes all water diverted by 18N/7E-3J1.
18N/8E-1M1 (Sheet 9)	Camptonville Water Service	Campbell Gulch	Munic.	150 persons*	111*	(b)	--	--	About 1853	Gravity; concrete dam 10 feet high, 60 feet long, with 1.5 miles of 8-inch pipe to 335,000-gallon storage tank.	Former owners: James Campbell, Labadie. Supplies community of Camptonville. Reported amount diverted is for 6/1/57 - 10/30/57 only.
18N/7E-24D1 (Sheet 9)	Bullards Bar Reservoir Pacific Gas and Electric Company	North Yuba River	Power	6,500 kw installed generating capacity at Bullards Bar Powerhouse	350,200	Approp.	700 cfs 5,000 af 10,000 af 15,000 af 5,335 af	A-2197[a] A-3026[a] A-5004[a] A-10282[a]	1921	Gravity and storage; variable radius concrete arch dam, 193 feet high, 520 feet long, with 31,490 acre-foot reservoir.	Former owner: H. P. Whitney, et al. Augments flow of North Yuba River for rediversion by 18N/7E-25F1.**
18N/7E-25F1 (Sheet 9)	Colgate Tunnel Pacific Gas and Electric Company	North Yuba River*	Power Irrig.	24,000 kw installed generating capacity at Colgate Powerhouse (*)	284,520*	Approp.	100 cfs	A-9516*,[a]	1926	Gravity; concrete dam, 47 feet high, 175 feet long, with 4.7 miles of variable section tunnel and 0.3 mile of penstock.	Stream flow of North Yuba River augmented by 18N/7E-24D1 (Bullards Bar Reservoir). Rediverts water stored by 18N/7E-24D1 under appropriative Application Nos. 5004 and 10282 in addition to the reported right. In addition to reported amounts diverted, 17,770 acre-feet were delivered to 17N/7E-16H1, Browns Valley Ditch (Pike Subunit), at head of penstock.**

* See remarks.
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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Bullards Bar Subunit (Continued)						
18N/8E-8F1 (Sheet 9)	Erle Pauly	Tributary to Willow Creek	Irrig. Domestic Stock. Power	10 acres by flooding* (c) 20 head 2.5 kw	400	(b)	--	--	About 1870	Gravity; earth dam 12 feet high, 50 feet long, with 75 feet of 8-inch pipe, 100 feet of 6-inch pipe and 300 feet of earth ditch and flume.	Former owners: Clay, Nelson, Carleon, Acock, Conroy. Previously irrigated an additional 9 acres.
19N/7E-9Q1 (Sheet 6)	Sacramento Box and Lumber Company	Indian Creek	Indust.	Lumber millpond	Not meas.*	(b)	--	--	Prior 1957	Gravity; earth dam 15 feet high, 350 feet long.	Additional water purchased from Oroville-Wyandotte Irrigation District.
19N/7E-14H1 (Sheet 6)	Mrs. Edna A. Whitehead	Empire Creek	Irrig. Domestic	5 acres by flooding (c)	Not meas.	(b)	--	--	About 1884	Gravity; rock and earth dam 8 feet high, 10 feet long, with 1.0 mile of earth ditch.	Former owners: Johnson, Brown.
19N/8E-28N1 (Sheet 6)	E. A. Nelson	Bridger Creek	Irrig.	16 acres by flooding	186*	Riparian	--	--	Prior 1957	Gravity; concrete dam 4 feet high, 15 feet long, with 0.5 mile of earth ditch.	Reported amount diverted is for 7/1/57 - 10/30/57 only.
19N/8E-31G1 (Sheet 6)	Fred N. Baker	Mill Creek	Irrig.	63 acres by sprinkler and flooding	185*	Riparian	--	--	About 1909	Gravity; wood flume with two earth ditches having a total length of 1.6 miles.	Reported amount diverted is for 6/15/57 - 9/30/57 only.
19N/8E-34B1 (Sheet 6)	James and Frank Pendola	Brandy Creek	Irrig. Stock.	56 acres by flooding 30 head	450*	Approp.	300 MI	--	About 1914	Gravity; rock dam 3 feet high, 10 feet long, with 2.8 miles of earth ditch.	Reported amount diverted is for 5/25/57 - 10/17/57 only.
19N/8E-35J1 (Sheet 6)	Julius A. Cassano	French Creek	Irrig. Stock.	7 acres by flooding 12 head	94*	Approp.	--	Deed	About 1880	Gravity; earth and rock dam with 0.7 mile of earth ditch.	Former owners: Meek, Biscoe. Reported amount diverted is for 5/8/57 - 10/31/57 only.
19N/9E-31K1 (Sheet 7)	Ed J. Kohler	Springs tributary to Campbell Gulch	Irrig.	5 acres by flooding	Not meas.	Riparian	--	Deed	1848	Gravity; developed springs with earth ditches.	Former owners: Eliza, Peter Yore.
21N/8E-34F1 (Sheet 2) (Import from Feather River Hydrographic Unit)	Bean Ditch Soper-Wheeler Company	Sly Creek	Irrig. Stock. Munic.	80 acres by flooding -- 200 persons*	289	Approp.	--	--	About 1863	Gravity; earth and rock dam 2 feet high, 30 feet long, with 6.1 miles of earth ditch.	Former owners: Garst, Goebel, Birmingham, Bean. Supplies community of Strawberry Valley.
					Camp Beale Subunit						
					(No Diversions)						

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-- Information not available.
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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Camp Far West Subunit						
14N/6E-21L1 (Sheet 19)	Camp Far West Reservoir; Camp Far West Irrigation District	Bear River	Export	(*)	Not meas.*	Approp. Approp.	5,000 af 5,000 af	A-2881[a] A-10190[a]	1928	Storage; concrete arch dam 62 feet high, 365 feet long, forming a 5,000-acre-foot reservoir.	Water is released to be rediverted for irrigation of approximately 4,100 acres in the Sacramento Valley Floor.
14N/7E-28B1 (Sheet 19)	Hannaman Ditch Kenneth J. Casper Nevada Irrigation District	Little Wolf Creek	Irrig. Stock.	61 acres by flooding --	1,015*	(b)	--	--	About 1850	Gravity; rock and concrete dam 6 feet high, 80 feet long, with 1.4 miles of concrete-lined canal.	Former owners: Sanford, Spoor. First 5 MI of water diverted is under Nevada Irrigation District water right and balance under agreement between Nevada Irrigation District and K. J. Casper.
14N/7E-33C1 (Sheet 19)	Kenneth J. Casper	Sanford Creek	Irrig. Stock.	31 acres by flooding --	138	(b)	--	--	1947	Gravity and storage; earth dam 40 feet high, 250 feet long, with 300 feet of concrete pipe and 0.2 mile of earth ditch.	Former owners: Sanford, Spoor.
					Combie Subunit						
13N/8E-2E1 (Sheet 21)	Van Giesen Dam (Lake Combie) Nevada Irrigation District	Bear River*	Irrig. Mining Domestic	(*)	Not meas.*	Approp.*	12,500 af	A-2652[a]	1928	Storage; variable radius arch dam 85 feet high, 762 feet long, with a 9,000-acre-foot reservoir.	Rediverts water under Application No. 1270 in addition to reported right. Stream flow of Bear River augmented by 16N/9E-10B1. Amount diverted used to supply 13N/8E-2E2 and to supplement 13N/8E-3H1. Diversion amount used to supplement 13N/8E-3H1 is released into stream channel for rediversion by that diversion.**
13N/8E-2E2 (Sheet 21)	Magnolia No. 3 Nevada Irrigation District	Lake Combie	Irrig. Stock. Domestic	(*)	1,258*	(b)	--	--	1934	Gravity and pump; 400 feet of concrete and earth ditch from Van Giesen Dam to intake for either a 75-hp electric-powered pump or a hydraulic-operated pump with short 12-inch pipeline and 300 feet of 18-inch pipe to small regulatory reservoir and 9.0 miles of earth ditch.	Reported amount diverted is for April 1957 - March 1958. Reported amount diverted is supplied by water impounded in 13N/8E-2E1 (Lake Combie).**
13N/8E-3H1 (Sheet 21)	Gold Hill Canal Nevada Irrigation District	Bear River*	Irrig. Stock. Domestic	(*)	33,110* (36,160)*	Approp.*	22 cfs	Deed	Prior 1901	Gravity; concrete dam 25 feet high, 200 feet long, with 96.5 miles of earth ditch, pipe, and wood flume.	Former owners: South Yuba Water Company, Pacific Gas and Electric Company. Stream flow of Bear River augmented by 13N/8E-2E1 (Lake Combie). Reported amount diverted for 1957 is for April-December only. Amount shown in parentheses is for 1958. Rediverts water under appropriative Application No. 1270 in addition to reported right.

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M						Combie Subunit (Continued)					
14N/8E-32D1 (Sheet 20)	E. H. and Callis J. Robbins	Magnolia Creek	Irrig. Stock. Recr.	4 acres by flooding 14 head Fishing and boating	Not meas.	Approp. Approp.	40 af 0.14 cfs	A-3995[a] A-15607[a]	1926	Pump and storage; concrete arch dam 35 feet high, 130 feet long, with portable gas pump and 450 feet of 4-inch pipe to earth ditch.	Former owners: D. L. Jungek, Callie Trueblood, Lionel Hargis.
14N/8E-35C1 (Sheet 20)	Edward and Margaret Pilliard	Tributary to Magnolia Creek	Irrig. Stock.	20 acres by flooding 60 head	Not meas.	Approp.	0.1 cfs 10 af	A-17495[a]	1956	Gravity and storage; earth dam 15 feet high, 250 feet long, with a short earth ditch.	
14N/9E-4G1 (Sheet 20)	Vernon S. and Edna Jaquith Barbara J. Haffey	Tributary to Campbell Creek	Irrig.	8 acres by sprinkler	Not meas.	Approp.	0.25 cfs 1.5 af	A-14773[a]	1953	Pump and storage; earth dam 10 feet high, 250 feet long, with 5-hp electric-powered pump and 0.2 mile of 3-inch and 0.1 mile of 6-inch pipe.	
14N/9E-29D1 (Sheet 20)	John Roland	Tributary to Bear River	Stock.	100 head*	Not meas.	(b)	--	--	1955	Storage; earth dam 23 feet high, 400 feet long.	Former owners: Mrs. Harris, H. Ruby. Purchases supplemental water from Pacific Gas and Electric Company for summer use.
15N/9E-21M1 (Sheet 18)	C. J. Rolph, Jr.	Tributary to Chicago Park Creek	Irrig.	9 acres by sprinkler	Not meas.	Approp.	21.3 af	A-14179[a]	About 1948	Gravity and storage; earth dam 25 feet high, 500 feet long, with a short 4-inch pipeline.	
15N/9E-22Q1 (Sheet 18)	Bear River Canal Wise Canal South Canal Pacific Gas and Electric Company	Bear River*	Power Irrig.	12,000 kw installed generating capacity at Halsey Powerhouse 12,000 kw installed generating capacity at Wise Powerhouse (*)	292,700	(*)	(*)	(*)	1852	Gravity; concrete dam with a total length of approximately 35.4 miles of canal, flume, and tunnel consisting of the Bear River Canal with a capacity of about 490 cfs and a length of 23.3 miles from the Bear River to Halsey Forebay; the Wise Canal with a capacity of about 450 cfs and a length of 5.9 miles from Halsey Afterbay to Wise Forebay; and the South Canal with a length of 6.2 miles from Wise Afterbay to Folsom Reservoir.	Former owners: Bear River and Auburn Water and Mining Company, South Yuba Water Company. Stream flow of Bear River augmented by 16N/11E-17E1 and 17N/12E-20J2 (Dutch Flat Subunit).** Rediverts water from Nevada Irrigation District under appropriative Application No. 6332 and water from Fordyce Reservoir under appropriative Application Nos. 2753 and 3550. Irrigation use consists of a portion of the supply to the Placer Water System (Bowman, Fiddler Green, and Dutch Ravine Canals and recharge to the Boardman System) and deliveries to Nevada Irrigation District.**
						Coon Creek Subunit					
12N/7E-2C1 (Sheet 22)	David W. Gooch	Tributary to Doty Ravine	Irrig. Stock.	3 acres by flooding 35 head	Not meas.	(b)	--	--	Prior 1914	Gravity; 0.2 mile of 8-, 6-, and 3-inch pipe to earth ditch.	Former owners: Bill Ayres, Flury, F. Nickerson.

* See remarks.
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-- Information not available.
For lettered footnotes, see last page of table.

TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Coon Creek Subunit (Continued)						
12N/7E-2Q1 (Sheet 22)	Vincent H. Anderson	Doty Ravine	Irrig. Stock.	2 acres by furrow 40 head	66	(b)	--	--	About 1870	Gravity; 0.2 mile of earth ditch.	Former owner: Veihmeirer.
12N/7E-3E1 (Sheet 22)	Domingoe Ferreira	Sailors Ravine	Irrig. Stock.	28 acres by furrow and sprinkler* 15 head	Not meas.	(b)	--	--	1946	Pump; 5-hp electric motor with 0.4 mile of 3.5-inch pipe.	Former owners: Wendle, Jim Dudley. Area irrigated received supplemental water purchased from Nevada Irrigation District.
12N/7E-4G1 (Sheet 22)	John G. Mohammed	Doty Ravine	Irrig. Stock.	58 acres by furrow and flooding 30 head	107	Riparian	--	--	1923	Pump; 15-hp electric motor with 0.6 mile of 4- and 6-inch pipe.	Former owner: Tony Dias.
12N/7E-12D1 (Sheet 22)	Vincent H. Anderson	Doty Ravine	Irrig. Stock.	33 acres by furrow 40 head	99	Riparian	--	--	About 1870	Gravity; 1.0 mile of earth ditch.	Former owner: Veihmeirer.
12N/7E-12H1 (Sheet 22)	Joe L. Garcia	Doty Ravine	Irrig.	22 acres by furrow	31	Approp.	--	--	About 1858	Gravity; 0.4 mile of earth ditch and 0.2 mile of 6-inch pipe.	Former owner: Kittler.
12N/8E-7F1 (Sheet 22)	Manuel Jacinto	Doty Ravine	Irrig. Stock.	18 acres by sprinkler 30 head	76	Riparian	--	--	About 1857	Gravity; concrete dam 3 feet high, 12 feet long, with 0.5 mile of 8-, 6-, and 4-inch pipe.	Former owners: Mrs. Ikey, Minnie Rogers.
12N/8E-7F2 (Sheet 22)	Edward R. Forster	Doty Ravine	Irrig. Stock.	8 acres by furrow 50 head	46	Riparian	--	--	Prior 1914	Gravity; 0.4 mile of concrete-lined and earth ditch.	Former owners: Ruth, Emil Mundt.
13N/6E-22A1 (Sheet 21)	Coon Creek Pump Nevada Irrigation District	Coon Creek*	Irrig. Stock. Domestic	(j)	889	(b)	--	--	Prior 1957	Pump; 50-hp electric motor with short pipeline to Doty Ravine North Canal	Stream flow of Coon Creek augmented by 13N/8E-3H1 (Combie Subunit) and deliveries from Pacific Gas and Electric Company.**
13N/6E-29H1 (Sheet 21)	Chamberlain Estate Company	Coon Creek	Irrig. Stock.	265 acres by sprinkler and flooding --	200*	Approp.	--	--	About 1908	Pump; 7.5-hp electric motor with0.1 mile of 14-inch concrete pipe and 455 feet of 12-inch concrete pipe.	Reported amount diverted is for 1958.
13N/6E-36G1 (Sheet 21)	Doty's South Ditch Nevada Irrigation District	Doty Ravine*	Irrig. Stock. Domestic	(j)	3,650	(b)	--	--	Prior 1957	Gravity; concrete dam 10 feet high, 25 feet long, with 5.0 miles of earth ditch.	Stream flow of Doty Ravine augmented by releases upstream.**
13N/6E-36H1 (Sheet 21)	James Ross	Tributary to Doty Ravine	Irrig. Stock.	15 acres by flooding* 10 head	Not meas.	(b)	--	--	About 1951	Gravity; earth dam 5 feet high, 200 feet long, with 0.2 mile of earth ditch.	Former owner: Walter V. Hoyte. Area irrigated received supplemental water purchased from Nevada Irrigation District.

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TABLE 6 (Continued)

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YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Coon Creek Subunit (Continued)						
13N/7E-13N1 (Sheet 21)	Camp Far West Canal Nevada Irrigation District	Coon Creek*	Irrig. Stock. Domestic	(j)	12,219*	(b)	--	--	Prior 1917	Gravity; concrete dam 15 feet high, 100 feet long, with 12.5 miles of earth ditch and wood flume.	Former owner: Pacific Gas and Electric Company. Reported amount diverted is for April 1957 - March 1958. Stream flow of Coon Creek augmented by 13N/8E-3H1 (Combie Subunit) and deliveries from Pacific Gas and Electric Company.**
13N/7E-16Q1 (Sheet 21)	C. S. Barton	Coon Creek	Irrig. Stock.	13 acres by flooding 80 head	112	Approp.	30 MI	Book A Pg. 162	About 1880	Gravity; concrete dam 3.5 feet high, 30 feet long, with 1.3 miles of earth ditch.	Former owner: Bernardo Nicora.
13N/7E-19R1 (Sheet 21)	Arthur B. Hopper	Tributary to Doty Ravine	Irrig. Stock.	9 acres by flooding and sprinkler* 100 head	5[d]	Riparian	--	Deed	1870	Gravity; 0.3 mile of earth ditch.	Former owners: Cartwright, Whittaker, L. P. Singer. Area irrigated received supplemental water purchased from Nevada Irrigation District.
13N/7E-26J1 (Sheet 21)	Take Hamasaki	Springs tributary to Caps Ravine	Irrig.	6 acres by sprinkler*	15[f]	Riparian	--	--	1957	Pump; 3-hp electric motor with 0.2 mile of 3.5-inch pipe.	Former owner: Bonnestill. Area irrigated received supplemental water purchased from Nevada Irrigation District.
13N/7E-26N1 (Sheet 21)	Leslie L., Sr. and Violet Moats	Caps Ravine	Irrig. Stock. Domestic	21 acres by flooding and furrow 12 head (c)	Not meas.	Approp.*	0.12 cfs	A-2190[a]	1928	Gravity; 0.4 mile of 6- and 4-inch pipe.	Former owners: C. E. Holz, J. S. Ferreira. Appropriative water right assigned to Mary G. Ferreira and L. and V. Moats in 1958.
13N/7E-28K1 (Sheet 21)	Frank C. McElroy	Caps Ravine	Irrig. Stock.	11 acres by flooding 30 head	62	Riparian	--	Deed	1955	Gravity; earth dam 6 feet high, 6 feet long, with 0.2 mile of earth ditch.	Former owners: Logan, Virtue.
13N/7E-28L1 (Sheet 21)	Douglas Newcomb	Tributary to Caps Ravine	Irrig. Stock.	22 acres by flooding 45 head	Not meas.	Approp.	20 MI	Book B Pg. 242[e]	1909	Gravity; earth ditch 0.4 mile long.	Former owner: J. D. Logan.
13N/7E-28L2 (Sheet 21)	Douglas Newcomb	Caps Ravine	Irrig. Stock.	12 acres by flooding 45 head	Not meas.	Approp.	--	Book B Pg. 242[e]	1909	Gravity; 0.$\hat{3}$ mile of earth ditch.	Former owner: J. D. Logan.
13N/7E-29B1 (Sheet 21)	Edgar E. and Ina E. Pellet*	Tributary to Doty Ravine	Irrig. Stock.	6 acres by furrow 20 head	153	Approp.	0.075 cfs	A-4717[a]	1925	Gravity; timber dam 1 foot high, 8 feet long, with 0.2 mile of earth ditch.	Ownership changed to Willard and Norma Duggan, September 1959. Former owners: C. F. Deisel, H. F. Vierra.
13N/7E-29N1 (Sheet 21)	Mrs. Desral Rahlman*	Tributary to Doty Ravine	Irrig.	10 acres by furrow	Not meas.	(b)	--	--	Prior 1957	Gravity; earth dam 10 feet high, 200 feet long, with two earth ditches having a total length of 0.2 mile.	Ownership changed to Sierra Gold Nursery in 1958.
13N/7E-30B1 (Sheet 21)	Arthur B. Hopper	Tributary to Doty Ravine	Irrig. Stock.	14 acres by sprinkler and flooding 100 head	13	Riparian	--	--	1870	Gravity; small earth dam with 0.2 mile of earth ditch.	Former owners: Cartwright, Whittaker, L. P. Singer.
13N/7E-30G1 (Sheet 21)	Arthur B. Hopper	Tributary to Doty Ravine	Irrig. Stock.	10 acres by sprinkler and flooding 100 head	5	Riparian	--	--	1870	Gravity; small earth dam with 0.2 mile of earth ditch.	Former owners: Cartwright, Whittaker, L. P. Singer.

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Coon Creek Subunit (Continued)						
13N/7E-30Q1 (Sheet 21)	Herman L. Robbins	Tributary to Doty Ravine	Irrig. Stock.	5 acres by flooding 14 head	Not meas.	Riparian	--	--	1948	Gravity; 0.1 mile of earth ditch.	Former owners: Herold, LaValle, Callison.
13N/7E-30Q2 (Sheet 21)	Herman L. Robbins	Tributary to Doty Ravine	Irrig. Stock.	4 acres by flooding 14 head	25	Riparian	--	--	1948	Gravity; concrete dam 3 feet high, 40 feet lon , with 0.1 mile of earth ditch.	Former owners: Herold, LaValle, Callison.
13N/7E-30R1 (Sheet 21)	Earl G. Calkins	Tributary to Doty Ravine	Irrig. Stock.	12 acres by sprinkler and furrow 15 head	13	(b)	--	--	Prior 1914	Pump; 5-hp electric motor with 300 feet of 2.5-inch pipe.	Former owners: Herold, LaValle, Callison, Page, Kemper.
13N/7E-31H1 (Sheet 21)	Mrs. May Herold Mrs. Bernice Herold Rossi	Doty Ravine	Irrig. Stock.	36 acres by flooding 53 head	1,081*	Approp.	40 MI	Book A Pg. 412	1879	Gravity; concrete dam 15 feet high, 30 feet long, with two earth ditches having a total length of 1.5 miles.	Former owner: J. Thorpe. Reported amount diverted is for May - December only.
13N/7E-32H1 (Sheet 21)	Walter Allen	Caps Ravine	Irrig. Stock.	11 acres by flooding* 165 head	14f	Riparian	--	--	About 1849	Gravity; small rock dam with 0.2 mile of earth ditch.	Former owners: Burge, G. Allen. Area irrigated received supplemental water purchased from Nevada Irrigation District.
13N/7E-32H2 (Sheet 21)	Walter Allen	Caps Ravine	Irrig. Stock.	18 acres by flooding 165 head	166	Riparian	--	--	About 1849	Gravity; concrete dam 4 feet high, 10 feet long, with 0.2 mile of 8-inch pipe.	Former owners: Burge, G. Allen.
13N/7E-32K1 (Sheet 21)	Walter Allen	Caps Ravine	Irrig. Stock.	4 acres by flooding 165 head	67*	Riparian	--	--	About 1849	Gravity; concrete dam 10 feet high, 60 feet long, with 0.1 mile of earth ditch.	Former owners: Burge, G. Allen. Reported amount diverted is for June-October only.
13N/7E-32Q1 (Sheet 21)	Peter J. Bagdanoff	Tributary to Doty Ravine	Irrig. Stock.	8 acres by flooding and sprinkler 33 head	Not meas.	(b)	--	--	1954	Gravity and pump; earth dam 8 feet high, 75 feet long, with 6.1 mile of earth ditch and 3-hp electric-power pump with 0.2 mile of 2- and 3-inch pipe.	Former owners: Rankin, Paetel.
13N/7E-33E1 (Sheet 21)	Manuel A. Ferry, Jr.	Caps Ravine	Irrig. Stock.	5 acres by flooding 50 head	Not meas.	Approp.	12 af	A-14884[a]	1880	Gravity; earth dam 15 feet high, 300 feet long, with 0.1 mile of 8-inch pipe.	Former owners: Skinner, Young.
13N/7E-33H1 (Sheet 21)	John C. Bertoglio	Tributary to Iron Canyon	Irrig. Stock.	48 acres by flooding 30 head	Not meas.	(b)	--	--	About 1940	Gravity; earth dam 10 feet high, 200 feet long, with two earth ditches having a total length of 0.8 mile.	Former owners: Hinckley, T. V. Doub.
13N/7E-34A1 (Sheet 21)	I. R. and Mary Souza	Caps Ravine	Irrig. Stock.	7 acres by furrow* --	46[d]	(b)	--	--	1922	Gravity; small wood diversion box with 0.4 mile of 4-inch pipe.	Former owner: Harry N. Holmes. Area irrigated received supplemental water purchased from Nevada Irrigation District.

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TABLE 6 (Continued)

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YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apporsnt water right			Indicated date of appro-priation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D S & M					Coon Creek Subunit (Continued)						
13N/7E-34G1 (Sheet 21)	I. R. and Mary Souza	Sailors Ravine	Irrig.	6 acres by furrow*	55[d]	Approp.	0.125 cfs	A-1923[a]	1920	Gravity; concrete dam 4 feet high, 15 feet long, with 0.3 mile of earth ditch.	Former owner: Harry N. Holmes. Area irrigated received supplemental water purchased from Nevada Irrigation District.
13N/7E-34K1 (Sheet 21)	Mrs. Julia Nunes	Sailors Ravine	Irrig.	12 acres by furrow	Not meas.	(b)	--	--	About 1917	Gravity; 400 feet of 6-inch pipe and 0.1 mile of earth ditch.	Former owner: Jacob Shinnler.
13N/7E-34P1 (Sheet 21)	Mrs. Julia Nunes	Sailors Ravine	Irrig.	13 acres by furrow	Not meas.	Riparian	--	--	1949	Pump; 2.5-hp electric motor with 350 feet of 3-inch pipe.	Former owner: Jacob Shinnler.
13N/7E-35A1 (Sheet 21)	Mrs. Mary G. Ferreira	Sailors Ravine	Irrig. Stock.	23 acres by flooding 60 head	141	Approp.	0.625 cfs	A-17223[a]	1956	Gravity; concrete dam 4 feet high, 25 feet long, with 60 feet of 10-inch pipe and 0.7 mile of earth ditch.	Former owner: Mary Beerman.
13N/7E-36J1 (Sheet 21)	Stanley J. and Betty R. Samson	Sailors Ravine	Irrig. Stock.	25 acres by sprinkler* 48 head	25[f]	Approp.	0.07 cfs	A-15290[a]	1952	Storage and pump; earth and rock dam 25 feet high, 120 feet long, with a 10-hp electric motor and 500 feet of 6-inch pipe.	Former owner: Roy Gassaway. Area irrigated received supplemental water purchased from Nevada Irrigation District.
13N/8E-14A1 (Sheet 21)	A. J. Marty	North Fork Dry Creek	Irrig. Stock. Recr.	15 acres by sprinkler 105 head Fishing in reservoir	Not meas.	(b)	--	--	Prior 1957	Gravity and storage; earth dam 28 feet high, 360 feet long, with short 4-inch pipeline.	
13N/8E-18F1 (Sheet 21)	John Rainey	Orr Creek	Irrig.	6 acres by flooding	Not meas.	Riparian	--	--	About 1880	Gravity; earth and rock dam 2 feet high, 4 feet long, with 0.3 mile of earth ditch.	Former owner: Lorenson.
13N/8E-18F2 (Sheet 21)	John Rainey	Orr Creek	Irrig.	4 acres by flooding	Not meas.	Riparian	--	--	About 1880	Gravity; earth and rock dam 2 feet high, 2 feet long, with 0.1 mile of earth ditch.	Former owner: Lorenson.
13N/8E-19C1 (Sheet 21)	Harold E. Hubbard	Dry Creek	Irrig. Stock.	31 acres by flooding* 30 head	Not meas.	Riparian	--	--	Prior 1900	Gravity; earth and rock dam 2 feet high, 10 feet long, with 0.5 mile of earth ditch.	Former owner: Recknagel. Area irrigated received supplemental water purchased from Nevada Irrigation District.
13N/8E-19H1 (Sheet 21)	John Rainey	Dry Creek	Irrig.	17 acres by flooding	Not meas.	Riparian	--	--	About 1930	Gravity; rock dam 2 feet high, 20 feet long, with 0.5 mile of earth ditch.	Former owners: Huntley, Robert Rainey.
13N/8E-22E1 (Sheet 21)	Ralph E. Enzler	Dry Creek	Irrig. Stock.	9 acres by sprinkler --	Not meas.	Approp.	0.22 cfs	A-15298[a]	1953	Pump; 15-hp electric motor with 0.3 mile of 5-inch pipe.	
13N/8E-26F1 (Sheet 21)	Don L. and Lillian D. Castle	Tributary to Dry Creek	Irrig. Stock.	10 acres by sprinkler --	30	Approp.	0.16 cfs	A-14389[a]	1957	Pump; 5-hp electric motor with 0.3 mile of 3.5-inch pipe.	

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YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

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			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Coon Creek Subunit (Continued)						
13N/8E-31D1 (Sheet 21)	August Henriquez	Springs tributary to Deadman Canyon	Irrig. Domestic	8 acres by furrow* (c)	Not meas.	Riparian	--	--	About 1860	Gravity from springs adjacent to area of use.	Former owners: Hulbert, Teagarden, Lowery. Area irrigated received supplemental water purchased from Nevada Irrigation District.
13N/8E-34F1 (Sheet 21)	James E. and Elsie W. Webb	Rock Creek	Irrig.	6 acres by sprinkler and flooding	33	Approp.	0.05 cfs	A-14264[a]	1906	Pump; 3-hp electric motor with 400 feet of 3-inch pipe.	Former owners: Simpson, Ernie Sather.
13N/8E-34H1 (Sheet 21)	Alvin W. Mueso	Tributary to Rock Creek	Irrig.	40 acres by furrow	16	Approp.	0.375 cfs	A-14266[a]	1930	Pump; 5-hp electric motor with 500 feet of 6-inch pipe and 0.4 mile of 4-inch pipe.	
					Deer Creek Subunit						
16N/6E-24L1 (Sheet 15)	Donald and Charles Staples	Deer Creek	Irrig. Stock. Domestic	14 acres by flooding 50 head (c)	61	Riparian	--	--	About 1880	Gravity; rock and concrete dam 5 feet high, 60 feet long, with 1.2 miles of earth ditch.	Former owners: Finney, Bean.
16N/7E-20E1 (Sheet 15)	China Ditch Nevada Irrigation District	Deer Creek*	Irrig. Stock. Domestic	(j)	15,043*	Approp.	100 cfs*	A-1615[a]	1860	Gravity; rock dam 4 feet high, 35 feet long, with 26.0 miles of earth ditch and wood flume.	Former owner: Excelsior Water and Mining Company. Stream flow of Deer Creek augmented by 16N/9E-2R1 and 17N/12E-20J2 (Donner Pass Subunit). Reported amount diverted is for April 1957 - March 1958. Appropriative water right amount of 100 cfs is total for this diversion and 16N/8E-12K1, 16N/12E-18M1, 16N/9E-7H1, 16N/9E-10B1, 17N/10E-32M1 and 17N/10E-34E1. Also rediverts water stored under Application No. 1614.**
16N/7E-21N1 (Sheet 15)	Roy Van Tiger	Nigger Creek	Irrig. Stock.	15 acres by flooding 500 head	323	Approp.	--	--	About 1868	Gravity; concrete dam 2 feet high, 8 feet long, with 0.7 mile of earth ditch.	
16N/7E-22N1 (Sheet 15)	Roy Van Tiger	Nigger Creek	Irrig.	102 acres by flooding*	132[d]	Approp.	--	--	About 1868	Gravity; concrete dam 2 feet high, 8 feet long, with 1.5 miles of earth ditch.	Area irrigated received supplemental water purchased from Nevada Irrigation District.
16N/7E-23N1 (Sheet 15)	Malcolm R. Hill	Nigger Creek	Irrig. Stock.	15 acres by flooding* 20 head	8[f]	Approp.	10 af	A-14896[a]	1952	Gravity and storage; earth dam 15 feet high, 200 feet long, with 0.2 mile of stream channel and 0.4 mile of earth ditch.	Area irrigated received supplemental water purchased from Nevada Irrigation District.

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YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

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			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Deer Creek Subunit (Continued)						
16N/7E-26N1 (Sheet 15)	Albert J. Nightingale	Tributary to Squirrel Creek	Irrig. Stock.	9 acres by sprinkler 30 head	Not meas.	Approp.	0.25 cfs	A-16626[a]	1952	Pump; 7-hp gasoline engine with 400 feet of 4-inch pipe and 300 feet of 2-inch pipe.	
16N/7E-29E1 (Sheet 15)	Union Ditch J. C. Peacock	Squirrel Creek	Irrig. Stock.	69 acres by flooding and sprinkler* 90 head	1,107*,f	Riparian	--	--	Prior 1920	Gravity; concrete and rock dam 16 feet high, 30 feet long, with 2.2 miles of earth ditch.	Former owners: Herbert J. Nile, Burtener. Area irrigated received supplemental water purchased from Nevada Irrigation District. Reported amount diverted is for 4/10/57 - 12/31/57 only.
16N/7E-33C1 (Sheet 15)	E. S. Hass	Squirrel Creek	Irrig.	3 acres by sprinkler	Not meas.	Riparian	--	--	Prior 1957	Pump; 2-hp gasoline engine with 1.5-inch pipeline.	Former owners: Thomas E. Dee, McGill, Peterson.
16N/7E-35C1 (Sheet 15)	Carl Niesen	Grubb Creek	Irrig. Stock.	34 acres by flooding* --	Not meas.	Riparian	--	Deed	About 1852	Gravity; wood dam 5 feet high, 20 feet long, with two earth ditches having a total length of 0.4 mile.	Former owners: James Ennor, Jesse Ennor. Area irrigated received supplemental water purchased from Nevada Irrigation District.
16N/7E-35D1 (Sheet 15)	Ralph J. and Lois Winslow	Squirrel Creek	Irrig.*	(*)	None	Riparian	--	Deed	About 1852	Gravity; small earth dam with 0.4 mile of earth ditch.	Former owners: James Ennor, Jesse Ennor. Irrigated 64 acres by flooding jointly with 16N/7E-35D2 until 1956.
16N/7E-35D2 (Sheet 15)	Ralph J. and Lois Winslow	Grubb Creek	Irrig.*	(*)	None	Riparian	--	Deed	About 1852	Gravity; small earth dam with 50 feet of wood flume to ditch from 16N/7E-35D1.	Former owners: James Ennor, Jesse Ennor. Irrigated 64 acres by flooding jointly with 16N/7E-35D1 until 1956.
16N/8E-12K1 (Sheet 16)	Newtown Ditch Nevada Irrigation District	Deer Creek*	Irrig. Stock. Domestic	(j)	4,701	Approp.	(*)	A-1615[a]	1851	Gravity; concrete dam 2 feet high, 120 feet long, with 19.0 miles of earth ditch and wood flume.	Former owner: Excelsior Water and Mining Company. Stream flow of Deer Creek augmented by 16N/9E-2R1 and 17N/12E-20J2 (Donner Pass Subunit). ** See 16N/7E-20E1 for water right amount.
16N/8E-14C1 (Sheet 16)	Leland H. Brown	Deer Creek	Irrig. Stock. Mining	16 acres by flooding 20 head Placer mine	Not meas.	Riparian	--	Deed	Prior 1900	Gravity; small rock and gravel dam with 1.8 miles of earth ditch.	Former owners: William Brown, Jerry M. Brown.
16N/8E-18M1 (Sheet 16)	Tunnel Ditch Nevada Irrigation District	Deer Creek*	Irrig. Stock. Domestic	(j)	5,153* (6,693)*	Approp.	(*)	A-1615[a]	1852	Gravity; concrete dam 8 feet high, 80 feet long, with 12.0 miles of earth ditch and tunnel.	Former owner: Excelsior Water and Mining Company. Stream flow of Deer Creek augmented by 16N/9E-2R1 and 17N/12E-20J2 (Donner Pass Subunit). Reported amount diverted for 1957 is for April - December only. Amount shown in parentheses is total for 1958. ** See 16N/7E-20E1 for water right amount.
16N/8E-20M1 (Sheet 16)	Edwin A. Deutler	Spring tributary to Deer Creek	Irrig. Domestic	12 acres by flooding (c)	Not meas.	Riparian	--	--	Prior 1900	Gravity; 75 feet of 6-inch pipe and 0.2 mile of earth ditch.	Former owners: Frank Seely, Bierwagen.
16N/8E-21G1 (Sheet 16)	Clifford G. Thorson	Slate Creek	Irrig. Stock.	13 acres by flooding 30 head	Not meas.	Riparian	--	Deed	Prior 1900	Gravity; small earth dam with 2.5 miles of earth ditch.	Former owners: Davis, Wall.

* See remarks.
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-- Information not available.
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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apporsnt water right			Indicated date of appro-priation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Deer Creek Subunit (Continued)						
16N/8E-22H1 (Sheet 16)	John J. Looser	Slate Creek	Irrig.	10 acres by flooding*	Not meas.	Riparian	--	--	About 1875	Gravity; small wood dam with 0.2 mile of earth ditch.	Former owners: Morgan, Rowe. Area irrigated received supplemental water purchased from Nevada Irrigation District.
16N/9E-2R1 (Sheet 16)	Scotts Flat Dam Nevada Irrigation District	Deer Creek	Irrig. Stock. Domestic	(*)	Not meas.*	Approp.	60,000 af	A-1614[a]	1947	Storage; earth dam 140 feet high, 722 feet long, with 27,400-acre-foot reservoir releasing into stream channel for rediversion downstream.	Amount diverted used to supplement 16N/7E-20E1, 16N/8E-12K1, 16N/8E-18M1, 16N/9E-7H1 and 16N/9E-10B1.**
16N/9E-7H1 (Sheet 16)	Rough and Ready Ditch Nevada Irrigation District	Deer Creek*	Irrig. Stock. Domestic	(*)	2,746*	Approp.	(*)	A-1615[a]	1850	Gravity; masonry dam 15 feet high, 80 feet long, with 13.3 miles of earth ditch.	Former owner: Excelsior Water and Mining Company. Stream flow of Deer Creek augmented by 16N/9E-2R1 and 17N/12E-20J2 (Donner Pass Subunit). Reported amount diverted is for April 1957 - March 1958. See 16N/7E-20E1 for water right amount.**
16N/9E-10B1 (Sheet 16)	D-S Canal (Deer Creek Reservoir) Nevada Irrigation District	Deer Creek*	Irrig. Stock. Domestic	(*)	30,063*	Approp.	(*)	A-1615[a]	1928	Gravity and storage; concrete variable radius arch dam 92 feet high, 334 feet long, with 1,400-acre-foot reservoir and 24.0 miles of earth ditch and wood flume.	Stream flow of Deer Creek augmented by 16N/9E-2R1 and 17N/12E-20J2 (Donner Pass Subunit). Reported amount diverted is for April 1957 - March 1958. See 16N/7E-20E1 for water right amount.**
16N/9E-17J1 (Sheet 16)	Nevada City Water Department	Little Deer Creek	Munic.	2,562 persons*	3,272*	Approp.	170 MI	--	1910	Gravity; concrete box 12 feet square at foot of falls with 0.6 mile of 18-inch pipe, 0.5 mile of earth ditch, and 0.4 mile of 9-inch pipe to reservoir.	Supplies community of Nevada City. Supplemented by water purchased from Nevada Irrigation District. Reported amount diverted is for 1958.
17N/10E-32E1 (Sheet 13)	Nevada Irrigation District	North Fork Deer Creek	Irrig. Stock. Domestic	(*)	(*)	(b)	--	--	Prior 1957	Gravity; concrete dam 10 feet high, 35 feet long, with 0.1 mile of wood flume to wood flume from 17N/10E-32M1.	Amount diverted and details of use reported under 17N/10E-32M1.
17N/10E-32M1 (Sheet 13)	Snow Mountain Ditch Nevada Irrigation District	South Fork Deer Creek*	Irrig. Stock. Domestic	(*)	4,782*	Approp.	(*)	A-1615[a]	Prior 1901	Gravity; masonry dam 16 feet high, 60 feet long, with 15 miles of earth ditch and wood flume.	Former owners: South Yuba Water Company, Pacific Gas and Electric Company. Stream flow of Deer Creek augmented by 17N/12E-20J2 (Donner Pass Subunit). Reported amount diverted is for April 1957 - March 1958 and includes all water diverted by 17N/10E-32E1. See 16N/7E-20E1 for water right amount.**
17N/10E-34E1 (Sheet 13)	Cascade Canal Nevada Irrigation District	South Fork Deer Creek	Irrig. Stock. Domestic	(*)	25,220*	Approp.	(*)	A-1615[a]	Prior 1901	Gravity; concrete dam 20 feet high, 50 feet long, with 58.0 miles of earth ditch, pipe, and wood flume.	Former owners: South Yuba Water Company, Pacific Gas and Electric Company. Stream flow of Deer Creek augmented by 17N/12E-20J2 (Donner Pass Subunit). Reported amount diverted is for April 1957 - March 1958. See 16N/7E-20E1 for water right amount.**

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M						Donner Pass Subunit					
17N/11E-4F1 (Sheet 13)	Tahoe Sugar Pine Company	Canyon Creek	Indust. Munic.	Lumber mill 200 persons*	1,526*	Approp.	--	--	About 1850	Gravity; log dam 3 feet high, 100 feet long, with 3.4 miles of earth ditch and wood flume.	Former owners: Callahere, Bradley, J. Crowley and J. Phelps. Supplies community of Washington. Reported amount diverted is for July - December only.
17N/12E-6D1 (Sheet 14)	Nevada Irrigation District	Fall Creek	Irrig. Mining Domestic Power	(*)	Not meas.*	Approp. Approp. Approp. Approp. Approp. Approp.	15 cfs 15 cfs 10 cfs 10 cfs 85 cfs 85 cfs 17,000 af	A-1270[a] A-2372[a] A-6701[a] A-6702[a] A-8178[a] A-8180[a]	1927	Gravity; concrete dam 20 feet high, 150 feet long, with 200 feet of semi-circular flume and 0.5 mile of earth ditch to connection with 18N/12E-8C2.	Amount diverted includes all water diverted by 18N/12E-28E1 and 18N/12E-29H1. Combined supply used to supplement 18N/12E-8C2 (Bowman-Spaulding Conduit).**
17N/12E-6M1 (Sheet 14)	Nevada Irrigation District	Trap Creek	Irrig. Mining Domestic Power	(*)	Not meas.*	Approp. Approp. Approp. Approp. Approp. Approp.	5 cfs 5 cfs 5 cfs 5 cfs 15 cfs 15 cfs 3,000 af	A-1270[a] A-2372[a] A-6701[a] A-6702[a] A-8178[a] A-8180[a]	1927	Gravity; stream intercepted by 18N/12E-8C2.	Amount diverted used to supplement 18N/12E-8C2 (Bowman-Spaulding Conduit).**
17N/12E-7H1 (Sheet 14)	Nevada Irrigation District	Rucker Creek	Irrig. Mining Domestic Power	(*)	Not meas.*	Approp. Approp.	25 cfs 25 cfs 5,000 af	A-8178[a] A-8180[a]	1927	Gravity; stream intercepted by 18N/12E-8C2.	Amount diverted includes all water diverted by 17N/12E-9C1 and 17N/12E-8E1. Combined supply used to supplement 18N/12E-8C2 (Bowman-Spaulding Conduit).**
17N/12E-8E1 (Sheet 14)	Rucker Lake Pacific Gas and Electric Company	Rucker Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1871	Storage; earth and rock dam, 20 feet high, 765 feet long, and 620-acre-foot reservoir releasing into stream channel for rediversion by 17N/12E-7H1.	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems.**
17N/12E-9C1 (Sheet 14)	Blue Lake Pacific Gas and Electric Company	Rucker Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1870	Storage; earth and rock dam, 23 feet high, 230 feet long, and 1,123 acre-foot reservoir releasing into stream channel for rediversion by 17N/12E-7H1.	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems.**
17N/12E-17B1 (Sheet 14)	Fuller Lake Pacific Gas and Electric Company	Jordan Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1870	Storage; earth dam, 36 feet high, 365 feet long, and 1,130 acre-foot reservoir.	Reservoir used as forebay for Spaulding Powerhouse No. 3.**

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Donner Pass Subunit (Continued)						
17N/12E-20H1 (Sheet 14)	Lake Spaulding Pacific Gas and Electric Company	South Yuba River	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1892	Storage; variable radius concrete arch dam, 275 feet high, 800 feet long, concrete gravity dam 25 feet high, 360 feet long, and concrete gravity dam 55 feet high, 800 feet long, forming a 74,488-acre-foot reservoir with short pressure tunnel to Spaulding Powerhouses Nos. 1 and 2.	Former owner: South Yuba Water Company. Regulates South Yuba River, including releases from upstream storage reservoirs of Pacific Gas and Electric Co. and 18N/12E-8C2 (Bowman-Spaulding Conduit), to supply 17N/12E-20J1 and 17N/12E-20J2. Present dam located one-half mile below original structure.**
17N/12E-20J1 (Sheet 14)	Drum Canal Pacific Gas and Electric Company	Lake Spaulding via Spaulding Powerhouse No. 1.	Power	6,400 kw installed generating capacity at Spaulding Powerhouse No. 1. 48,000 kw installed generating capacity at Drum Powerhouse	305,400*	(b)	--	--	1913	Gravity; 8.4 miles of canal and flume from Spaulding Powerhouse No. 1 to Drum Forebay.	Water released from Drum Powerhouse augments flow of Bear River for 16N/11E-17E1 (Dutch Flat Subunit) and 15N/9E-22Q1 (Combie Subunit).**
17N/12E-20J2 (Sheet 14)	South Yuba Canal Pacific Gas and Electric Company	Lake Spaulding via Spaulding Powerhouse No. 2	Power	3,370 kw installed generating capacity at Spaulding Powerhouse No. 2 5,500 kw installed generating capacity at Deer Creek Powerhouse*	65,690*	(b)	--	--	1865	Gravity; 18 miles of canal, flume, and tunnel from Spaulding Powerhouse No. 2 to Deer Creek Powerhouse Forebay.	Former owner: South Yuba Water Company. Of reported amount diverted 10,106 acre-feet were released to the Bear River to augment flow for 15N/9E-22Q1 (Combie Subunit) and 17N/11E-36D1 (Dutch Flat Subunit). Water released from Deer Creek Powerhouse is used to supplement Nevada Irrigation District diversions from Deer Creek.**
17N/12E-22G1 (Sheet 14)	Chubb Lake Boy Scouts of America-Marin Council.	Tributary to Gonelson Canyon	Recr. Fire prot.	Swimming, boating, and fishing in reservoir --	Not meas.	Approp.	42.5 af	A-13399[a]	1949	Storage; earth dam 8 feet high, 138 feet long.	
17N/12E-24K1 (Sheet 14)	Crystal Lake Central Pacific Railroad Company	Tributary to South Yuba River	Domestic	(c)	Not meas.	(b)	--	--	1920	Storage and gravity; concrete dam 9 feet high, 300 feet long, 200-acre-foot reservoir, and pipeline.	
17N/13E-10A1 (Sheet 14)	Lake Sterling Pacific Gas and Electric Company	Tributary to Fordyce Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1877	Storage; rock fill dam 25 feet high, 225 feet long, and 1,648-acre-foot reservoir releasing into stream channel for rediversion by 18N/13E-34J1 (Lake Fordyce).	Former owner: South Yuba Water Company. Stored for subsequent use in Pacific Gas and Electric Company's power and water supply sustems.**
17N/14E-23M1 (Sheet 14)	Lake Van Norden Pacific Gas and Electric Company	South Yuba River	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1916	Storage; earth and rock dam 27 feet high, 1,637 feet long, and 5,874-acre-foot reservoir releasing into stream channel for rediversion by 17N/12E-20H1 (Lake Spaulding)	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems.**

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Donner Pass Subunit (Continued)						
17N/14E-29E1 (Sheet 14)	Kidd Lake Pacific Gas and Electric Company	Tributary to South Yuba River	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1855	Storage; earth and rock dam 40 feet high, 430 feet long, and 1,492 acre-foot reservoir releasing into stream channel for rediversion by 17N/12E-20H1 (Lake Spaulding).	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems.**
17N/14E-30R1 (Sheet 14)	Lower Peak Lake Pacific Gas and Electric Company	Tributary to South Yuba River	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1860	Storage; earth and rock dam 32 feet high, 655 feet long, and 494-acre-foot reservoir releasing into stream channel for rediversion by 17N/12E-20H1 (Lake Spaulding)	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems.**
17N/14E-32D1 (Sheet 14)	Upper Peak Lake Pacific Gas and Electric Company	Tributary to South Yuba River	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1850	Storage; earth and rock dam 37 feet high, 290 feet long, and 1,607 acre-foot reservoir releasing into stream channel for rediversion by 17N/12E-20H1 (Lake Spaulding).	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems.**
17N/15E-16E1 (Sheet 14)	Lake Angela Central Pacific Railroad Company	Tributary to South Yuba River	Domestic	(c)	Not meas.	(b)	--	--	1924	Storage and gravity; concrete dam 22 feet high, 697 feet long, 215 acre-foot-reservoir and pipeline.	
17N/15E-20A1 (Sheet 14)	Lake Mary Central Pacific Railroad Company	Tributary to South Yuba River	Domestic	(c)	Not meas.	(b)	--	--	1926	Storage and gravity; earth dam 25 feet high, 600 feet long, 172-acre-foot reservoir, and pipeline.	
18N/11E-36J1 (Sheet 10)	Nevada Irrigation District	Clear Creek	Irrig. Mining Domestic Power	(*)	Not meas.*	Approp. Approp. Approp. Approp.	5 cfs 5 cfs 30 cfs 30 cfs 6,000 af	A-6701[a] A-6702[a] A-8178[a] A-8180[a]	1927	Gravity; stream intercepted by 18N/12E-8C2.	Amount diverted used to supplement 18N/12E-8C2 (Bowman-Spaulding Conduit).**
18N/12E-8C1 (Sheet 11)	Bowman Lake Nevada Irrigation District	Canyon Creek	Irrig. Mining Domestic Power	(*)	85,456*	Approp. Approp.	63,325 af 63,325 af	A-1270[a] A-2372[a] (*)	1872*	Storage; constant radius arch concrete dam, 108 feet high, 400 feet long, and a rock fill dam 171 feet high, 700 feet long, with 68,000-acre-foot reservoir releasing to 18N/12E-8C2 via 0.2 mile of natural channel.	Former owner: North Bloomfield Gravel and Mining Company, Northern Water and Power Company. Rediverts water under Application Nos. 2275, 2276, 8177, and 8179 in addition to diversions under Application Nos. 1270 and 2372. Present dam constructed in 1927. Amount diverted includes all water diverted by 18N/12E-11D1, 18N/12E-27C1, 18N/13E-17P1 and 19N/13E-31N1. Combined amount and that diverted by 19N/12E-12N1 (Alleghany Subunit) used to supply 18N/12E-8C2.**

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Donner Pass Subunit (Continued)						
18N/12E-8C2 (Sheet 11)	Bowman-Spaulding Conduit Nevada Irrigation District	Bowman Lake	Irrig. Mining Domestic Power	(*)	123,259*	Approp. Approp.	200 cfs 250 cfs	A-1270[a] A-2372[a] (*)	1927	Gravity; concrete dam 40 feet high, 150 feet long, with 11.3 miles of canal, metal flume, and tunnel with a capacity of 250 cfs.	Reported amount diverted is supplied by water impounded in 18N/12E-8C1 (Bowman Lake). In addition to this amount supplemental supply is received from 17N/12E-6D1, 17N/12E-6M1, 17N/12E-7H1, 18N/11E-36J1, 18N/12E-19D1 and 17N/12E-17B1. Combined amount delivered to Pacific Gas and Electric Company at Spaulding Powerhouse No. 3 for generation of power and supplemental supply to 17N/12E-20H1 (Lake Spaulding).**
18N/12E-11D1 (Sheet 11)	Sawmill Lake Nevada Irrigation District	Canyon Creek	Irrig. Mining Domestic Power	(*)	Not meas.*	Approp. Approp.	615 af 615 af	A-1270[a] A-2372[a]	Prior 1901	Storage; rock fill dam 50 feet high, 384 feet long, with 3,375-acre-foot reservoir releasing to 18N/12E-8C1 via 0.8 mile of natural channel.	Former owners: North Bloomfield Gravel and Mining Company, Northern Water and Power Company. Amount diverted includes all water diverted by 18N/12E-27C1 and 18N/13E-17P1. Combined supply used to supplement 18N/12E-8C1 (Bowman Lake).**
18N/12E-15C1 (Sheet 11)	Upper Rock Lake Pacific Gas and Electric Company	Texas Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1855	Storage; earth and rock dam 20 feet high, 230 feet long, and 207-acre-foot reservoir releasing into stream channel for rediversion by 18N/12E-19P1.	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems. **
18N/12E-15N1 (Sheet 11)	Lake Culbertson Pacific Gas and Electric Company	Tributary to Texas Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1872	Storage; earth and rock dam 19 feet high, 258 feet long, and 850-acre-foot reservoir releasing into stream channel for rediversion by 18N/12E-19P1.	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems. **
18N/12E-19P1 (Sheet 11)	Nevada Irrigation District	Texas Creek	Irrig. Mining Domestic Power	(*)	Not meas.*	Approp. Approp. Approp. Approp.	30 cfs 30 cfs 70 cfs 70 cfs 14,000 af	A-1270[a] A-2372[a] A-8178[a] A-8180[a]	1927	Gravity; masonry dam 40 feet high, 30 feet long, with 300 feet of wood flume to connection with 18N/12E-8C2.	Amount diverted includes all water diverted by 18N/12E-15C1, 18N/12E-15N1, 18N/12E-20H1 and 18N/12E-20F1. Combined supply used to supplement 18N/12E-8C2 (Bowman-Spaulding Conduit).**
18N/12E-20H1 (Sheet 11)	Lower Lindsey Lake Pacific Gas and Electric Company	Lindsey Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1870	Storage; earth and rock dam 17 feet high, 486 feet long, and 320-acre-foot reservoir releasing into stream channel for rediversion by 18N/12E-19P1.	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems.**
18N/12E-21F1 (Sheet 11)	Middle Lindsey Lake Pacific Gas and Electric Company	Lindsey Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1870	Storage; earth and rock dam 9 feet high, 372 feet long, and 103-acre-foot reservoir releasing into stream channel for rediversion by 18N/12E-19P1.	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems. **

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Donner Pass Subunit (Continued)						
18N/12E-26L1 (Sheet 11)	Downey Lake California State Department of Fish and Game	Granite Creek	Recr.	Fishing	Not meas.	(b)	--	--	1954	Storage; earth dam 13 feet high, 25 feet long, 162-acre-foot reservoir.	
18N/12E-27C1 (Sheet 11)	Island Lake Nevada Irrigation District	Tributary to Canyon Creek	Irrig. Mining Domestic Power	(*)	Not meas.*	Approp.	--	--	1901	Storage; rock dam 14 feet high, 93 feet long, with 330-acre-foot reservoir releasing to 18N/12E-11D1 via 3.5 miles of natural channel.	Former owners: North Bloomfield Gravel and Mining Company, Northern Water and Power Company. Amount diverted used to supplement 18N/12E-11D1.**
18N/12E-28E1 (Sheet 11)	Upper Feeley Lake Pacific Gas and Electric Company	Lake Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1870	Storage; earth and rock dam 22 feet high, 186 feet long, and 780-acre-foot reservoir releasing into stream channel for rediversion by 17N/12E-6D1.	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems. **
18N/12E-29H1 (Sheet 11)	Lower Feeley Lake Pacific Gas and Electric Company	Lake Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1870	Storage; earth and rock dam 17 feet high, 150 feet long, and 184-acre-foot reservoir releasing into stream channel for rediversion by 17N/12E-6D1.	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems.**
18N/13E-17P1 (Sheet 11)	French Lake Nevada Irrigation District	Canyon Creek	Irrig. Mining Domestic Power	(*)	Not meas.*	Approp.	--	--	1859	Storage; rock dam 100 feet high, 200 feet long, with 12,500-acre-foot reservoir releasing to 18N/12E-11D1 via 3.5 miles of natural channel.	Former owner: Summit Water and Irrigation Company, Empire Mines and Investment Company. Amount diverted used to supplement 18N/12E-11D1.**
18N/13E-27B1	Meadow Lake Pacific Gas and Electric Company	Tributary to Fordyce Lake	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1864	Storage; earth and rock dam 37 feet high, 1,020 feet long, and 4,800-acre-foot reservoir releasing into stream channel for rediversion by 18N/13E-34J1 (Lake Fordyce).	Former owner: South Yuba Water Company. Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems.**
18N/13E-34J1 (Sheet 11)	Lake Fordyce Pacific Gas and Electric Company	Fordyce Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	Approp.	26,582 af 26,670 af	A-2750[a] A-3550[a]	1873	Storage; rock fill dam 140 feet high, 965 feet long, and 46,662-acre-foot reservoir releasing into stream channel for rediversion by 17N/12E-20H1 (Lake Spaulding).	Former owner: South Yuba Water Company. Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems. Rediverte water released by 17N/13E-10A1, 18N/13E-27B1 and 18N/14E-22B1.**
18N/14E-22B1 (Sheet 11)	White Rock Lake Pacific Gas and Electric Company	White Rock Creek	Irrig. Domestic Munic. Power	(*)	Not meas.	(b)	--	--	1850	Storage; gravel, rock, and earth dam 19 feet high, 285 feet long, and 578-acre-foot reservoir releasing into stream channel for rediversion by 18N/13E-34J1 (Lake Fordyce).	Stored for subsequent use in Pacific Gas and Electric Company's power and water supply systems.**

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Donner Pass Subunit (Continued)						
19N/13E-31N1 (Sheet 8)	Jackson Lake Nevada Irrigation District	Jackson Creek	Irrig. Mining Domestic Power	(*)	Not meas.*	Approp. Approp.	1,060 af 1,060 af	A-1270[a] A-2372[a]	Prior 1857	Storage; earth dam 22 feet high, 755 feet long, with 1,000-acre-foot reservoir releasing to 18N/12E-8C1 via 3 miles of natural channel.	Former owner: Summit Water and Irrigation Company, San Juan Gold Mining Company. Amount diverted used to supplement 18N/12E-8C1 (Bowman Lake).**
					Dry Creek Subunit						
15N/7E-23E1 (Sheet 17)	M. C. Clingan	Tributary to Indian Springs Creek	Stock.	200 head	Not meas.	(b)	--	--	About 1945	Storage; earth dam 25 feet high, 200 feet long, with 35-acre-foot reservoir.	Former owner: Pat Shannon.
15N/7E-25H1 (Sheet 17)	Clarence R. Black	Dry Creek	Irrig. Stock. Recr.	26 acres by sprinkler 20 head Swimming in reservoir	62	Approp.	0.25 cfs	A-1518[a]	About 1953	Pump and storage; concrete dam 6 feet high, 20 feet long, and 7.5-hp electric-powered pump with 4-inch pipeline.	Former owner: W. E. O'Dell.
15N/8E-30J1 (Sheet 18)	Lowell L. Elster	Tributary to Dry Creek	Irrig. Stock.	5 acres by flooding* 30 head	Not meas.	Riparian	--	Patent	Prior 1907	Gravity; small earth and rock dam with 0.1 mile of earth ditch.	Former owners: Central Pacific Railroad, Crocker and Sanderson, Yeo, Jellinck, C. Elster, J. Elster. Area irrigated received supplemental water purchased from Nevada Irrigation District.
15N/8E-30K1 (Sheet 18)	Lowell L. Elster	Tributary to Dry Creek	Irrig. Stock.	5 acres by flooding* 30 head	Not meas.	Riparian	--	Patent	1907	Gravity; small earth and rock dam with 0.1 mile of earth ditch.	Former owners: Central Pacific Railroad, Crocker and Sanderson, Yeo, Jellinck, C. Elster. Area irrigated received supplemental water purchased from Nevada Irrigation District.
					Dutch Flat Subunit						
16N/10E-25P1 (Sheet 16)	Alta Powerhouse Afterbay Pacific Gas and Electric Company	Little Bear River	Irrig. Domestic Munic.	(*)	Not meas.*	(b)	--	--	1902	Gravity; diverted directly from afterby to canal from 17N/11E-36D1.	Amount diverted used to supplement 17N/11E-36D1 (Boardman Canal).**
16N/10E-36F1 (Sheet 16)	Earl Smith*	Tributary to Bear River	Irrig. Recr.	6 acres by sprinkler and flooding Fishing	Not meas.	(b)	--	--	1854	Storage and pump; earth dam 30 feet high, 735 feet long, with pump.	Former owners: Decker, Linn. Ownership changed to I. J. Scott, et al in 1959.
16N/10E-36Q1 (Sheet 16) (Import from American River Hydrographic Unit)	Pulp Mill Canal Pacific Gas and Electric Company	Canyon Creek	Irrig. Domestic Munic.	(*)	758*	--	--	--	--	--	Reported amount diverted used to supplement 17N/11E-36D1 (Boardman Canal).**

* See remarks.
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-- Information not available.
For lettered footnotes, see last page of table.

TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Dutch Flat Subunit (Continued)						
16N/11E-9J1 (Sheet 16)	Pitman Ravine Flume Pacific Gas and Electric Company	Pitman Ravine	Irrig. Domestic Munic. Power	(*)	470*	(b)	--	--	Prior 1957	Gravity; concrete dam 4 feet high, 10 feet long, with 250 feet of wood flume to connection with 17N/11E-36D1.	Reported amount diverted is for 5/1/58 - 12/31/58 only. Amount diverted used to supplement 17N/11E-36D1 (Boardman Canal).**
16N/11E-17E1 (Sheet 16)	Dutch Flat Tunnel Pacific Gas and Electric Company	Bear River*	Power	22,000 kw installed generating capacity at Dutch Flat Powerhouse	322,600	Approp.	525 cfs	A-5970[a]	1943	Gravity; constant radius concrete arch dam 80 feet high, 324 feet long, with 4.1 miles of variable section tunnel and 0.7 mile of penstock.	Stream flow of Bear River augmented by 17N/12E-20J1 (Drum Canal). Release from powerhouse augments flow of river for 15N/9E-22Q1 (Combie Subunit).**
16N/11E-21E1 (Sheet 16) (Import from American River Hydrographic Unit)	Towle Canal Pacific Gas and Electric Company	Canyon Creek and augmented flow of Canyon Creek	Irrig. Domestic Munic. Power	(*)	20,400*	(b)	--	--	1893	(*)	Reported amount diverted includes 1,942 acre-feet released to Canyon Creek from 17N/12E-20J1 (Donner Pass Subunit) at the Drum Forebay, and 16,591 acre-feet released to Canyon Creek from 17N/11E-36D1 (Boardman Canal). Diversion total is diverted through 4 miles of canal to the Alta Penstock then to the Lower Boardman Canal. Details of use reported under 17N/11E-36D1.**
17N/11E-36D1 (Sheet 13)	Boardman Canal System Pacific Gas and Electric Company	Bear River*	Irrig. Domestic Munic. Power	13,466 acres* Undetermined number Auburn, Colfax, Lincoln, Rocklin and Roseville 2,000 kw installed generating capacity at Alta Powerhouse	16,003*	(b)	--	--	1893	Gravity; concrete dam, 12 feet high, 60 feet long, with a total length of 73.7 miles of canal, flume, tunnel and pipeline consisting of Upper Boardman Canal with a capacity of 50 cfs and a length of 7.1 miles from Bear River to Canyon Creek; Towle Canal with a capacity of 50 cfs and a length of 4.0 miles from Canyon Creek to Alta Penstock; Boardman Canal (lower) with a varying capacity of 75.5-12.5 cfs and a total length of 62.6 miles from Alta Afterbay to Roseville Regulator, including Cedar Creek Canal from Lake Alta to Monte Vista Pipeline with a length of 2.7 miles and a capacity of 30 cfs.**	Former owner: South Yuba Water Company. Stream flow of Bear River augmented by 17N/12E-20J2 (Donner Pass Subunit). In addition to reported amount diverted supplemental supply is received from 16N/11E-9J1, 16N/10E-25P1, 16N/11E-21E1 (Import - Towle Canal), 16N/10E-36Q1 (Import - Pulp Mill Canal), 15N/9E-22Q1 (Combie Subunit) and other individual diversions. Reported area irrigated does not include that area irrigated outside the Yuba-Bear Rivers Hydrographic Unit by the system.**

* See remarks.
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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Dutch Flat Subunit (Continued)						
17N/12E-33B1* (Sheet 14)	Lake Valley Canal Pacific Gas and Electric Company	North Fork of North Fork American River*	Power	(*)	7,271*	--	--	--	--	--	Stream flow of river augmented by Lake Valley Reservoir and Kelley Lake. Amount diverted used to supplement 17N/12E-20J1 (Drum Canal).
(Import from American River Hydrographic Unit)											
					French Corral Subunit						
16N/7E-3E1 (Sheet 15)	C. R. and G. W. Maish	Kentucky Ravine	Irrig.	61 acres by sprinkler and flooding*	Not meas.	Riparian	--	--	About 1880	Gravity; small earth and rock dam with 0.2 mile of earth ditch.	Former owners: Nebone, C. N. White, E. K. Harrison. Area irrigated received supplemental supply from 16N/7E-4Q1 and water purchased from Nevada Irrigation District.
16N/7E-4Q1 (Sheet 15)	C. R. and G. W. Maish	Rapp Creek	Irrig.	(*)	Not meas.*	Approp.	0.38 cfs	A-15843[a]	About 1880	Gravity; small earth and rock dam with 0.4 mile of earth ditch.	Former owners: Nebone, C. N. White, E. K. Harrison. Amount diverted used to supplement 16N/7E-3E1.
16N/8E-4E1 (Sheet 16)	Joy Hilliard	Rush Creek	Irrig. Domestic	8 acres by flooding (c)	87*	Riparian	--	Deed	About 1850	Gravity; small rock dam with 0.4 mile of earth ditch.	Former owner: Larsen. Reported amount diverted is for June - December, 1958 only.
17N/7E-26F1 (Sheet 12)	Louis F. Dudley	French Corral Creek	Irrig. Stock.	48 acres by flooding 75 head	Not meas.	Riparian	--	Deed	About 1850	Gravity; earth and rock dam 4 feet high, 10 feet long, with 0.6 mile of earth ditch.	Former owners: George Callahan, Munia, Reese.
17N/7E-33R1 (Sheet 12)	C. R. and G. W. Maish	Kentucky Ravine	Irrig. Stock.	5 acres by flooding* 80 head	94[f]	(b)	--	--	About 1880	Gravity; small rock dam with 60 feet of 6-inch metal flume and 0.4 mile of earth ditch.	Former owners: Nebone, C. N. White, E. K. Harrison. Area irrigated received supplemental water purchased from Nevada Irrigation District. Reported amount diverted is for 5/16/57 - 9/15/57 only.
17N/7E-33R2 (Sheet 12)	C. R. and G. W. Maish	Kentucky Ravine	Irrig. Stock.	11 acres by flooding* 80 head	Not meas.	(b)	--	--	About 1880	Gravity; small rock dam with 0.6 mile of earth ditch.	Former owners: Nebone, C. N. White, E. K. Harrison. Area irrigated received supplemental water purchased from Nevada Irrigation District.
17N/8E-1N1 (Sheet 12)	Vincent Bellet	Shady Creek	Irrig. Stock.	33 acres by flooding 90 head	74	Approp.	--	--	About 1850	Gravity; concrete dam 8 feet high, 50 feet long, with 1.1 miles of wood flume, tile pipeline, and earth ditch.	Former owners: Hughes, Phelen.
17N/8E-1P1 (Sheet 12)	Vincent Bellet	Shady Creek	Irrig.	50 acres by flooding*	Not meas.*	(b)	--	--	About 1850	Gravity; rock dam with 2.6 miles of earth ditch.	Former owners: Hughes, Phelen. Area irrigated received supplemental supply from 17N/8E-2J1.

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					French Corral Subunit (Continued)						
17N/8E-2B1 (Sheet 12)	James M. Selvester	Springs tributary to Shady Creek	Irrig. Domestic Stock.	15 acres by flooding (c) 33 head	Not meas.	Riparian	--	--	1954	Gravity; short earth ditches direct from springs.	Former owners: Monroe, Watson, Thorpe.
17N/8E-2C1 (Sheet 12)	James M. Selvester	Springs tributary to Shady Creek	Irrig.	11 acres by flooding	Not meas.	Riparian	--	--	1954	Gravity; earth dam 10 feet high, 60 feet long, with 0.2 mile of earth ditch.	Former owner: Thorpe.
17N/8E-2F1 (Sheet 12)	James M. Selvester	Springs tributary to Shady Creek	Irrig.	9 acres by flooding	Not meas.	Riparian	--	--	1956	Gravity; earth dam 6 feet high, 60 feet long, with short earth ditch.	
17N/8E-2J1 (Sheet 12)	Edward Bellet	Tributary to Shady Creek	Irrig.	(*)	Not meas.*	(b)	--	--	About 1950	Gravity and storage; earth dam 65 feet high, 300 feet long, with short earth ditch connected to ditch from 17N/8E-1P1.	Former owners: Cox, Phelen. Amount diverted used to supplement 17N/8E-1P1.
17N/8E-9Q1 (Sheet 12)	Bert L. Burda	Tributary to Shady Creek	Irrig. Stock. Recr.	5 acres by sprinkler and flooding* 35 head Swimming in reservoir	45	Approp.	14 af	A-16780[a]	About 1955	Gravity and storage; earth dam 12 feet high, 60 feet long, with 48 feet of 6-inch concrete pipe to earth ditch.	Area irrigated received supplemental supply from 17N/8E-15D1.
17N/8E-11F1 (Sheet 12)	L. M. White	Shady Creek	Mining Domestic	Placer (c)	Not meas.	Riparian	--	--	1953	Gravity; gravel wing dam with 0.2 mile of earth ditch and 245 feet of wood flume.	
17N/8E-15D1 (Sheet 12)	Pine Grove Ditch* Menona Mining Co.	Shady Creek	Irrig. Stock. Domestic	125 acres by sprinkler and flooding* 400 head (c)	232* (628)*	(b)	--	--	1851	Gravity; 8 miles of earth ditch and a 250-acre-foot reservoir formed by a concrete dam 44 feet high, 555 feet long.	Former owners: Milton Mining Company, Eureka Lake and Yuba Canal Company, Consolidated River Minee Company. System and water rights leased by French Corral County Water District. Reported amount diverted is for July - December 1957 only. Amount shown in parentheses is total for 1958. Portion of amount diverted used to supplement 17N/8E-9Q1 and 17N/8E-16B1. Of reported area irrigated 3 acres are located in Pike Subunit.
17N/8E-15D2 (Sheet 12)	Calvin Milhoue	Shady Creek	Irrig. Stock	14 acres by flooding 45 head	Not meas.	Riparian	--	--	1951	Gravity; small gravel dam with 0.2 mile of 2-inch pipe and earth ditch.	
17/8E-16B1 (Sheet 12)	Bert L. Burda	Tributary to Shady Creek	Irrig. Stock.	12 acres by sprinkler and flooding* 35 head	Not meas.	Approp.	22 af	A-16780[a]	About 1955	Gravity and storage; earth dam 16 feet high, 70 feet long, with earth ditch.	Area irrigated received supplemental supply from 17N/8E-15D1.
17N/8E-20G1 (Sheet 12)	Frank S. Reader	Shady Creek	Irrig.	7 acres by flooding	95	Approp.	--	--	About 1856	Gravity; gravel dam with 1.0 mile of earth ditch and wood flume.	Former owner: James H. Reader.

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DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					French Corral Subunit (Continued)						
17N/8E-20N1 (Sheet 12)	Francis J. Reader	Shady Creek	Irrig.	14 acres by sprinkler	Not meas.	Approp.	--	--	1856	Pump; 3-hp electric motor with 0.2 mile of 2.5-inch pipe.	Former owners: James H. Reader, Frank S. Reader.
17N/8E-25Q1 (Sheet 12)	Lake Vera Piedmont Campfire Girls	Rock Creek	Recr.	Swimming, boating, and fishing in reeervoir	159	Approp.*	2.0 cfs 70 af	A-5719[a] A-4494[a]	Prior 1905*	Storage; concrete sleb and buttrese dam 15 feet high, 125 feet long.	Former owners: Pacific Gas and Electric Company, Ray Harris. Water right in name of Fidelity Title Insurance Co. Present dam built about 1926 approximately 300 feet upstream from original dam.
17N/8E-27H1 (Sheet 12)	Excelsior Ditch* Nevada Irrigation District	South Yube River	Irrig. Stock. Domestic	(j)	14,198*	Approp.	125 cfs	A-1616[a] (*)	1859	Gravity; concrete dam 15 feet high, 120 feet long, with 19.4 miles of earth ditch and wood flume.	Former owner: Excelsior Weter and Mining Company. Reported amount diverted is for April 1957 - March 1958. Formerly known as South Yuba Ditch. Rediverts water stored under Application No. 8177 in addition to diversion under Application No. 1616.**
17N/9E-27K1 (Sheet 13)	D. M. Loney	North Rock Creek	Irrig. Stock.	12 acres by sprinkler 15 head	118*	Approp.	4 MI	Book 1, Pg. 188 of Water Rights	1876	Gravity; earth, log and rock dam with 0.4 mile of earth ditch.	Former owners: Victor Souvie, Ethel Preston. Reported amount diverted is for 1958.
17N/9E-28N1 (Sheet 13)	William L. Davies	Rock Creek	Irrig. Stock. Domestic	25 acres by flooding 30 head (c)	89*	Approp.	--	--	About 1850	Gravity; rock dam with 1.7 miles of earth ditch.	Former owners: Jacob Arbogast, Scott, Davie. Reported amount diverted is for 5/15/58 - 12/31/58.
17N/9E-34K1 (Sheet 13)	Harry M. Davis	Rock Creek	Irrig. Domestic	9 acres by sprinkler and flooding (c)	24	(b)	--	--	About 1850	Gravity; log dam with 2.4 miles of earth ditch.	Former owners: South Yuba Water Company, Pacific Gas and Electric Company, Souvee, City of Nevada City. Reported amount diverted is for May - December 1958.
17N/9E-35E1 (Sheet 13)	Arbogast Brothers	Rock Creek	Irrig.	9 acres by flooding	100*	Approp.	--	Deed	Prior 1900	Gravity; earth dam with 1.1 miles of earth ditch.	Former owners: Cooper, Pacific Gas and Electric Company. Reported amount diverted is for 1955.
					French Dry Creek Subunit						
16N/5E-10B1 (Sheet 15)	C. C. French Sam I. Turnell	Little Dry Creek	Irrig. Stock.	10 acres by flooding 20 head	Not meas.	Approp.	.45 cfs 19.5 af	A-12154[a]	1947	Gravity and storage; earth dam 10 feet high, 225 feet long, with two earth ditches having a total length of 0.4 mile.	Former owner: Zbinden
16N/5E-12C1 (Sheet 15)	Neal W. Duckels	Tributary to Dry Creek	Irrig.	10 acres by flooding	90*	(b)	--	--	1956	Gravity; earth dam 6 feet high, 120 feet long, with 0.4 mile of earth ditch.	Former owner: W. L. Dolan. Reported amount diverted is for 5/15/57 - 9/25/57 only.

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M						French Dry Creek Subunit (Continued)					
16N/5E-12G1 (Sheet 15)	Neal W. Duckele	Tributary to Dry Creek	Irrig. Stock. Recr.	1 acre by flooding 50 head Boating and fishing in reservoir	79	(b)	--	--	1948	Gravity and storage; earth dam 12 feet high, 400 feet long, with short earth ditch.	Former owner: W. L. Dolan.
16N/6E-7L1 (Sheet 15)	Smith Bar Ditch Henry P. Smith	Dry Creek	Irrig. Stock.	177 acres by flooding 1,100 head	3,503*	Approp. Approp.*	6.0 cfs 0.625 cfs	A-14371[a] A-14951[a]	Prior 1914	Gravity; rock and concrete dam 20 feet high, 150 feet long, with 5.5 miles of earth ditch.	Former owners: Ramm, Sidney V. Smith. Appropriative water right Application No. 14951 in name of John W. Lloyd, T. M. and Harold J. Sperbeck, and Ann Benton. Reported amount diverted is for April-December only.
16N/6E-14P1 (Sheet 15)	Englebright Reservoir California Debris Commission	Yuba River	Debris control Power	-- (*)	(*)	Approp.* Approp.*	67,000 af 700 cfs 5,335 af	A-8794[a] A-10282[a]	1941	Storage; concrete dam 260 feet high, 1,142 feet long, with 70,000-acre-foot reservoir.	Portion of amount diverted used to supplement 16N/6E-14Q1. Water rights in name of Pacific Gas and Electric Company.
16N/6E-14Q1 (Sheet 15)	Narrows Powerhouse Pacific Gas and Electric Company	Englebright Reservoir	Power	9,350 kw installed generating capacity	466,000	Approp.	700 cfs 67,000 af	A-8794[a]	1942	Gravity; 1,503 feet of 108-inch concrete-lined tunnel from Englebright Reservoir.	
16N/7E-4E1 (Sheet 15)	Howard C. and L. E. Richardson	Tributary to Yuba River	Irrig. Stock.	(*)	Not meas.*	Approp.	25 af	A-12700[a]	1948	Gravity and storage; earth dam 12 feet high, 365 feet long, with 0.3 mile of earth ditch.	Former owner: Blenman. Amount diverted used to supplement 16N/7E-5H1.
16N/7E-5H1 (Sheet 15)	Howard C. and L. E. Richardson	Tributary to Yuba River	Irrig. Stock. Domestic	11 acres by flooding and sprinkler* 40 head (c)	Not meas.	Approp.	2.2 af	A-14991[a]	1952	Gravity; earth dam 2 feet high, 6 feet long, with 0.2 mile of earth ditch.	Former owner: Blenman. Area irrigated received supplemental supply from 16N/7E-4E1 and purchased water from Nevada Irrigation District.
17N/5E-27R1 (Sheet 12)	Burris, Burris, Burris and Hoxworth	Little Dry Creek	Irrig. Stock.	16 acres by flooding 10 head	96	Riparian	--	--	About 1880	Gravity; earth dam 2 feet high, 4 feet long, with 0.5 mile of earth ditch.	
17N/5E-34K1 (Sheet 12)	James M. Stevens	Little Dry Creek	Irrig. Stock.	14 acres by flooding* 50 head	202	Approp. Approp. Approp.	0.25 cfs 15 af 11 af	A-10181[a] A-12118[a] A-14946[a]	About 1/50	Pump and storage; earth dam 15 feet high, 300 feet long, with 5-hp motor and 300 feet of 6-inch pipe.	Former owner: Arthur Locken. Area irrigated received supplemental water purchased from Browns Valley Irrigation District.
17N/6E-4H1 (Sheet 12)	Frank Carmichael	Dry Creek	Export*	(*)	2,450*	Approp. Approp.	25 cfs 16 cfs	A-2406[a] A-11596[a]	1909	Gravity; concrete and rock dam 15 feet high, 30 feet long, with 4.5 miles of earth ditch to hydrographic unit boundary.	Former owner: MacDonald. Water exported outside the Yuba-Bear Rivers Hydrographic Unit for use in the Feather River and Sacramento Valley Floor Hydrographic Units. Reported amount diverted is total for period 7/1/57-12/31/57. Portion of amount diverted is rediverted November 1 - April 1 from Tennessee Creek to 17N/7E-16H1 Browns Valley Ditch (Pike Subunit) on an exchange basis. Amount diverted received supplemental supply from 18N/6E-34Q1.

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YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					French Dry Creek Subunit (Continued)						
17N/6E-11E1* (Sheet 12)	Salvador S. Callejo	Oregon House Creek	Irrig. Stock.	27 acres by sprinkler and furrow* 10 head	Not meas.	Riparian	--	--	1946	Pump; tractor driven	Former owner: Knights. Portable pump location varies within 500 feet of location indicated. Area irrigated supplemented by ground water.
18N/6E-24M1 (Sheet 9)	Arthur J. Faquette	Dry Creek	Mining Stock. (*)	Placer mining 15 head (*)	Not meas.	Approp.	--	--	1865	Gravity; concrete dam 2 feet high, 15 feet long, with two earth ditches having a total length of 1.1 miles.	Former owners: Evans, Rose. Irrigated 16 acres by flooding until 1957.
18N/6E-34Q1 (Sheet 9)	Los Verjeles Dam Yuba Investment Company	Dry Creek	(*)	(*)	(*)	Approp.*	8,600 af	A-2406[a]	1915	Storage; concrete dam 56 feet high, 310 feet long, with 1,830-acre-foot reservoir releasing down 1 mile of natural channel to 17N/6E-4H1.	Former owner: MacDonald. Water right in name of Los Verjelse Land and Water Co. Amount diverted and details of use reported under 17N/6E-4H1.
18N/6E-34Q2 (Sheet 9)	Clint Givens	Dry Creek	Irrig. Stock. Domestic	20 acres by flooding and sprinkler 40 head (c)	69	Approp.	50 MI	--	1908	Gravity; earth and rock dam with 0.2 mile of earth ditch to 3-hp electric-powered pump with 400 feet of 4-inch pipe.	Former owners: Madruga, Nash.
18N/6E-36B1 (Sheet 9)	J. W. Treeler	Tributary to Dry Creek	Irrig. Stock.	6 acres by furrow and sprinkler 25 head	Not meas.	(b)	--	--	1949	Gravity and storage; earth dam 24 feet high, 300 feet long, with short earth ditch.	Former owner: Clarence Brown.
19N/6E-25D1 (Sheet 6)	Leslie W. Sills	New York Creek	Irrig.	4 acres by sprinkler	24	Riparian	--	--	About 1860	Pump; 5-hp electric motor with 400 feet of 4-inch pipe.	Former owners: Lockewood, Miller.
19N/6E-35M1 (Sheet 6)	Harry Howard	Dry Creek	Irrig. Stock.	17 acres by sprinkler and flooding* 94 head	Not meas.*	Riparian	--	Patent	1881	Gravity; rock and earth dam with two 0.4 mile earth ditches.	Former owners: John McCrank, Dacon, Weber. Water applied to reported area irrigated for four days only until distribution pump ceased to function for remainder of year.
19N/7E-17P1 (Sheet 6)	Harry Hulock	Tributary to Golden Gate Ravine	Munic.	350 persons*	48*	Approp.	7,200 gpd	A-4764[a]	1925	Gravity; 1.6 miles of 1- and 2-inch pipe.	Former owners: William H. Joy, Howard Burgan. Supplies community of Challenge. Reported amount diverted includes undetermined amount from groundwater.
19N/7E-18E1 (Sheet 6)	Martin Costa	Costa Creek	Irrig.*	(*)	None	Riparian	--	--	About 1850	Gravity; earth dam with 0.3 mile of earth ditch.	Irrigated 33 acres by flooding until 1957.
					Goodyears Bar Subunit						
19N/9E-6A1 (Sheet 7)	Cal-Ida Lumber Co.	Cherokee Creek	Indust. Fire prot.	Lumber mill	928	Approp.	2.0 cfs	A-10692[a]	1943	Gravity; concrete dam 2 feet high, 15 feet long, with 2.0 miles of earth ditch and wood flume.	

* See remarks.
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-- Information not available.
For lettered footnotes, see last page of table.

TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Goodyears Bar Subunit (Continued)						
19N/9E-6P1 (Sheet 7)	Cal-Ida Lumber Co.	Cherokee Creek	Indust. Fire prot.	(*)	Not meas.*	Approp.	2.0 cfs	A-10692[a]	1943	Pump; 15-hp motor with 0.3 mile of 4-inch pipe to connection with ditch from 19N/9E-6A1.	Auxiliary pump used to supplement 19N/9E-6A1.
19N/9E-8L1 (Sheet 7)	W. R. Ellsworth	Fiddle Creek	Domestic Mining Recr.	40 persons* Placer mine Fishing	462	Approp.	3.0 cfs	A-10856[a]	About 1860	Gravity; 0.6 mile of earth ditch and flume.	Former owners: Hobby, Pootes, Supplies domestic use in Cal-Ida Lumber Company camp.
19N/9E-20N1 (Sheet 7)	Joe G. and Blanche Brown	Tributary to Indian Creek	Mining	(*)	Not meas.*	Approp.	5.0 cfs	A-14918[a]	About 1868	Gravity; rock dam with 40 feet of wood flume to connection with ditch from 19N/9E-21L.	Former owner: Joubert Family. Amount diverted used to supplement 19N/9E-21L1.
19N/9E-21L1 (Sheet 7)	Joe G. and Blanche Brown	Indian Creek	Mining	Placer mine*	Not meas.	Approp.	3.0 cfs	A-14918[a]	About 1868	Gravity; 5.0 miles of earth ditch and wood flumes.	Former owner: Joubert Family. Received supplemental supply from 19N/9E-20N1 and 19N/9E-29A1.
19N/9E-29A1 (Sheet 7)	Joe G. and Blanche Brown	Grant Ravine	Mining	(*)	Not meas.*	Approp.	7.0 cfs	A-14918[a]	About 1868	Gravity; rock and earth dam with 0.1 mile of earth ditch to connection with ditch from 19N/9E-21L1.	Former owner: Joubert Family. Amount diverted used to supplement 19N/9E-21L1.
19N/10E-8C1 (Sheet 7)	Andrew Bachels	Woodruff Creek	Munic.	11 connections*	504*	Approp.	--	--	Prior 1874	Gravity; rock and gravel dam with 0.5 mile of earth ditch.	Former owners: Harris, Scheiber, Kennedy. Supplies community of Goodyears Bar. During summer season number of connections increases to about 50. Reported amount diverted is for July - November, only.
19N/10E-8F1 (Sheet 7)	M. P. Fiecher	Woodruff Creek	Domestic	(c)	197*	Approp.	0.055 cfs	A-9617[a]	1939	Gravity; log and board dam 4 feet high, 25 feet long with 0.4 mile of earth ditch.	Reported amount diverted is for May - November only.
19N/10E-18J1 (Sheet 7)	Best Mines Company, Inc.	Water Box Ravine	Indust.	Hard rock mine and crushing mill	210*	Approp.	3.0 cfs	A-14658[a]	About 1860	Gravity; 150 feet of metal flume to 20,000-gallon tank with 400 feet of 6-inch pipe to mine and mill.	Former owner: Alpha Hardware Company. Reported amount diverted is for 1958.
19N/10E-8A1 (Sheet 7)	Mrs. M. A. Wright	Rock Creek	Power Domestic	4 kilowatts (c)	Not meas.	(b)	--	--	About 1880	Gravity; log dam 4 feet high, 22 feet long, with 0.5 mile of earth ditch and flume.	Former owner: Kennedy Brothers.
20N/10E-14D1 (Sheet 4)	Downieville Public Utility District	Downie River	Munic.	450 persons*	217*	Approp.	--	--	Prior 1914	Gravity; rock and earth dam with 4.0 miles of earth ditch to tank and reservoir.	Former owners: Gold Bluff Mines, Rosenfeld, Best Mines Company, Inc. Supplies community of Downieville. Reported amount diverted includes all water diverted by 20N/10E-26K1.
20N/10E-20B1 (Sheet 4)	Ed Chase	Goodyears Creek	Mining Domestic	(*) (c)	Not meas.	Riparian	--	Patent	About 1855	Gravity; rock and earth dam with 0.7 mile of earth ditch and wood flume.	Former owners: Patneaud, Sheehan, Brown, Higgins. Supplied a No. 4 hydraulic giant until 1955.

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Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Goodyears Bar Subunit (Continued)						
20N/10E-26K1 (Sheet 4)	Downieville Public Utility District	Pauley Creek	Munic.	(*)	(*)	Approp.	1.1 cfs	A-9827[a]	About 1935	Pump; 80-hp gasoline-powered engine with 0.2 mile of 6-inch pipe to connection with ditch from 20N/10E-14D1.	Amount diverted and details of use reported under 20N/10E-14D1.
20N/10E-32L1 (Sheet 4)	Joseph P. Bachele	Goodyears Creek	Irrig. Domestic Power	5 acres by flooding (c)	287*	Approp.	1,400 gpd	A-11994[a]	About 1870	Gravity; log dam 3 feet high, 48 feet long, with 1.0 mile of earth ditch.	Former owners: Bachel Family. Reported amount diverted is for August - November only.
20N/10E-33A1 (Sheet 4)	Axel Nasholm	Rosassco Ravine	Irrig. Domestic	4 acres by sprinkler (c)	Not meas.	Approp.	--	Book C pg. 231[h]	1877	Gravity; 0.5 mile of 2-inch pipe.	Former owners: John Carlsen, C. M. Caya, E. L. Case, H. W. Butler.
21N/10E-36R1 (Sheet 2)	P. W. Elliott Mary Ann McCalister, et al.	Daves Ravine	Mining Domestic	(*)	Not meas.*	Approp.	--	--	Prior 1900	Gravity; rock dam with 1.2 miles of earth ditch to connection with ditch from 21N/11E-18R1.	Former owners: Hearst, Nagen, B. D. Elliott. Amount diverted used to supplement 21N/11E-18R1.
21N/11E-18R1 (Sheet 3)	P. W. Elliott Mary Ann McCalister, et al.	Red Oak Canyon	Mining Domestic	Placer mine* (c)	Not meas.	Approp.	2.0 cfs	A-9750[a]	About 1860	Gravity; rock and earth dam with 6.0 miles of earth ditch and flume.	Former owners: Spaulding, B. D. Elliott. Mine receivee supplemental supply from 21N/10E-36R1 and 21N/11E-31C1.
21N/11E-31C1 (Sheet 3)	P. W. Elliott Mary Ann McCalister, et al.	Spring tributary to Red Oak Canyon	Mining Domestic	(*)	Not meas.*	Approp.	1.0 cfs	A-9750[a]	About 1860	Gravity; intercepted by ditch from 21N/11E-18R1.	Former owners: Spaulding, B. D. Elliott. Amount diverted used to supplement 21N/11E-18R1.
					Greenhorn Creek Subunit						
15N/9E-10C1 (Sheet 18)	A. F. Gelhaus	Butterfly Creek	Irrig. Stock. Fish culture	17 acres by flooding and sprinkler* 100 head Trout farm	Not meas.	Riparian	--	--	1860	Gravity; 0.3 miles of 4- and 6-inch pipe.	Former owners: Joseph Shebley, Oliver Shebley. Uses indicated received supplemental supply from 15N/9E-10G1.
15N/9E-10G1 (Sheet 18)	A. F. Gelhaus	Butterfly Creek	Irrig. Stock. Fish culture	(*)	Not meas.*	Riparian	--	--	1860	Pump; 400 feet of 4-inch pipe.	Former owners: Joseph Shebley, Oliver Shebley. Amount diverted used to supplement 15N/9E-10C1.
16N/9E-29M1 (Sheet 16)	Elmo C. Cox	Tributary to Little Greenhorn Creek	Irrig.	8 acres by sprinkler	42*	Riparian	--	Deed	About 1850	Gravity; rock dam with 0.2 mile of 4-inch pipe and earth ditch.	Former owner: Stewart. Reported amount diverted is for 1958.
16N/9E-32D1 (Sheet 16)	Andrew Ueland	Little Greenhorn Creek	Irrig. Stock.	10 acres by flooding 14 head	215*	Riparian	--	Deed	1890	Gravity; rock dam 3 feet high, 20 feet long, with 0.3 miles of earth ditch.	Reported amount diverted is for 1958
16N/9E-32M1 (Sheet 16)	Miss Lucy Wellee	Little Greenhorn Creek	Irrig. Stock.	11 acres by flooding --	373	Riparian	--	Deed	About 1880	Gravity; 0.5 mile of earth ditch.	Former owners: King, Penrose.

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M						La Porte Subunit					
20N/9E-18F1 (Sheet 4)	Forest Sheehan	Little Rock Creek	Irrig.	17 acres by sprinkler*	Not meas.	Riparian	--	Patent	About 1870	Gravity; wood-boxed spring with 0.4 mile of 1.5-inch and 6-inch pipe.	Former owners: Kingdon, Philander, Bean. Area irrigated received supplemental supply from 20N/9E-18M1.
20N/9E-18M1 (Sheet 4)	Forest Sheehan	Philander Creek	Irrig. Domestic	(*)	Not meas.*	Riparian	--	Patent	About 1870	Gravity; wood-boxed spring with about 0.4 mile of 2- and 4-inch pipe.	Former owners: Kingdon, Philander, Bean. Amount diverted used to supplement 20N/9E-18F1.
21N/9E-8F1 (Sheet 2)	La Porte Water District	Spring tributary to Rabbit Creek	Munic.	50 persons*	Not meas.	(b)	--	--	About 1900	Gravity; 0.9 mile of 2- and 3-inch pipe.	Former owners: Barnes, Pike. Supplies community of La Porte. During summer season number of persons increases to about 250. Diversion receives supplemental supply from 21N/9E-9F1.
21N/9E-9F1 (Sheet 2)	La Porte Water District	Spring tributary to East Branch Rabbit Creek	Munic.	(*)	Not meas.*	(b)	--	--	About 1850	Gravity; 0.5 mile of 2-inch pipe.	Former owners: Barnes, Pike. Amount diverted used to supplement 21N/9E-8F1.
21N/9E-13R1 (Sheet 2)	Andrew J. Modglin W. H. Pike	Deacon Long Ravine	Mining	Placer mine	Not meas.	Approp.*	12.5 cfs	A-10103[a]	About 1850	Gravity; rock and earth dam with 0.7 mile of earth ditch and flume.	Appropriative water right under name of Pioneer Project Partnership.
21N/10E-4B1 (Sheet 2)	Floyd Johnson	Potosi Creek	Mining*	(*)	None	Approp.	--	--	1953	Gravity; earth dam with 0.5 mile of 12-inch pipe.	Former owner: M. Murphy. Supplied placer mine until 1955.
21N/10E-7K1 (Sheet 2)	Andrew J. Modglin W. H. Pike	Stahls Ravine	Mining	Placer mine	Not meas.	Approp.	4.0 cfs	A-10104[a]	About 1860	Gravity; wood diversion box with 2.6 miles of earth ditch and flume.	
22N/10E-28B1 (Sheet 1)	McKenna Mining Co.	Slate Creek	Mining	Placer mine	Not meas.	(b)	--	--	About 1850	Gravity; about 7.5 miles of earth ditch and flume.	
						Orchard and Pleasant Grove Creeks Subunit					
12N/6E-14R1 (Sheet 22)	Hughes Reservoir Floyd Bonnifield	Tributary to Auburn Ravine	Stock. Recr.	150 head Fishing in reservoir	Not meas.	(b)	--	--	About 1910	Storage; earth dam 15 feet high, 400 feet long.	Former owners: Hughes, Lowe.
12N/7E-19F1 (Sheet 22)	Tom E. Allen	Tributary to Orchard Creek	Irrig. Stock.	11 acres by flooding 50 head	Not meas.	Approp.	0.20 cfs 3.25 af	A-13849[a]	About 1949	Gravity; earth dam 8 feet high, 200 feet long, with 0.3 mile of earth ditch.	

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DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M						Pike Subunit					
17N/7E-5J1 (Sheet 12)	Lake Francis Pacific Gas and Electric Company	Dobbins Creek	Irrig. Domestic Stock.	(*)	Not meas*	Approp.	--	--	1901	Storage; hydraulic fill 77 feet high, 1,300 feet long, and 1,905-acre-foot reservoir releasing to 1.3 miles of stream channel and 1.5 miles of earth ditch to 17N/7E-16H1.	Former owners: Yuba Electric Power Co., Bay Countiee Power Co. Amount diverted used to supply 17N/7E-16H1 (Browns Valley Ditch) in conjunction with 18N/7E-25F1 (Bullards Bar Subunit).**
17N/7E-16H1 (Sheet 12)	Browns Valley Ditch Browns Valley Irrigation District	North Yuba River via Colgate Tunnel	Irrig. Domestic Stock	(*)	20,036*	Approp.	--	--	Prior 1900	Gravity; 62.5 miles of earth ditch from distribution structure near head of Colgate Powerhouse Penstock.	Amount diverted is supplied from 17N/7E-5J1 and 18N/7E-25F1 (Bullards Bar Subunit) in lieu of water diverted through a separate diversion system from North Fork Yuba River. Diversion receives supplemental supply from 17N/6E-4H1 (Feather River Hydrographic Unit) November 1 - April 1 in exchange for water delivered outside of Browns Valley Irrigation District in the Sacramento Valley Floor Hydrographic Unit.**
17N/8E-2M1 (Sheet 12)	Roy D. and Geraldine Childers, et al	Springs tributary to Clear Creek	Irrig. Stock	11 acres by flooding -	Not meas.	Riparian	--	--	About 1885	Gravity; developed spring with short earth ditch.	
17N/8E-3A1 (Sheet 12)	Roy D. and Geraldine Childers, et al	Springs tributary to Clear Creek	Irrig. Stock	13 acres by flooding	Not meas.	Approp.	6 af	A-18079[a]	1956	Gravity and storage; earth dam with 0.2 mile of earth ditch.	
17N/8E-4N1 (Sheet 12)	Big French Reservoir Lorin N. Trubschenck	Springs tributary to Sweetland Creek	Irrig. Stock.	35 acres by flooding 25 head	Not meas.	Approp.	35 af	A-16823[a]	1850	Gravity and storage; earth dam with 0.6 mile of earth ditch.	Former owner: Eureka Mining Company
17N/8E-4R1 (Sheet 12)	E. L. Dow	Tributary to Clear Creek	Irrig.	2 acres by sprinkler	Not meas.	(b)	--	--	About 1900	Gravity and storage; earth dam 20 feet high, 250 feet long, with 0.2 mile of earth ditch.	
17N/8E-6R1 (Sheet 12)	Morris Reservoir M. Kehn	Tributary to North Yuba River	Irrig. Stock.	5 acres by sprinkler 65 head	7*	Approp.*	9.5 af	A-7217[a]	About 1860	Gravity and storage; earth dam 40 feet high, 500 feet long, with 0.3 mile of pipe.	Former owners: Morris, T. C. and O. V. Rhoades. Appropriative water right under name of Thaddsus C. and O. V. Rhoades. Reported amount diverted is for 1958.
18N/7E-33M1 (Sheet 9)	E. A. Ingersoll	Spring tributary to Dobbins Creek	Munic.	150 persons*	Not meas.	(b)	--	--	About 1870	Gravity; developed spring with 0.2 mile of 2-inch pipe.	Former owners: Merriam, Barnee, Menes. Supplies community of Dobbins.
18N/8E-15A1 (Sheet 9)	Cunningham Ditch M. C. Buta Mrs. W. C. Cunningham	Oregon Creek	Irrig. Stock.	26 acres by flooding 75 head	587	Approp.	--	--	1850	Gravity; concrete and timber dam with 200 feet of 30- and 36-inch pipe and 1.4 miles of earth ditch and flume.	Former owner: Peter Buta.
18N/8E-15R1 (Sheet 9)	George Buta	Railroad Creek	Irrig. Domestic	30 acres by flooding and sprinkler (c)	40	Riparian	--	Patent	About 1906	Gravity; earth dam with 0.1 mile of earth ditch.	Former owner: Peter Buta.

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Pike Subunit (Continued)						
18N/8E-20Q1 (Sheet 9)	Francis J. and Ruth Bartsch	Moonshine Creek	Irrig.	5 acres by flooding and sprinkler	274	Approp.	0.035 cfs	A-10980[a]	1909	Gravity; concrete dam 5 feet high, 20 feet long, with 0.4 mile of earth ditch.	Former owner: Richard Bartsch.
18N/8E-33M1 (Sheet 9)	F. N. Farnsworth	Clear Creek	Power	2.5 kilpwatts	Not meas.	Approp.	0.62 cfs	A-10854[a]	1946	Gravity; small concrete dam with 450 feet of 4- and 6-inch pipe.	
18N/9E-8M1 (Sheet 10)	Wesley B. Parker	Tributary to Grizzly Gulch	Irrig.	24 acres by sprinkler	70	(b)	--	--	About 1885	Gravity; concrete dam 12 feet high, 50 feet long, with 1.0 mile of earth ditch.	Former owner: Thomas Wayman.
					Rocklin Subunit						
11N/6E-25G1 (Sheet 23)	George Mavrlae	Antelope Creek	Irrig. Stock.	10 acres by sprinkler 450 head	13	Approp.	0.44 cfs	A-8037[a]	1934	Pump; 7.5-hp electric motor with short pipeline.	Former owner: G. F. Cooper.
11N/7E-1C1 (Sheet 23)	Gordon Glenn M. A. Harris	Tributary to Secret Ravine	Irrig. Stock	25 acres by flooding 38 head	466*	(b)	--	--	Prior 1957	Gravity; wood dam with 0.2 mile of earth ditch and 10-inch pipe.	Former owners: California Land Company, Mary Carter. Reported amount diverted is for 5/1/57 - 11/15/57 only.
11N/7E-2A1 (Sheet 23)	M. A. Harris	Secret Ravine	Irrig.	13 acres by sprinkler	27	Riparian	--	--	Prior 1957	Pump; 10-hp electric motor with 0.1 mile of 6-inch pipe.	
11N/7E-5R1 (Sheet 23)	George F. and Dixie M. Meredith	Antelope Creek	Irrig. Stock.	26 acres by flooding and sprinkler 40 head	Not meas.	Approp. Approp.	0.11 cfs 0.23 cfs	A-5806[a] A-9500[a]	1928	Pump; 0.2 mile of pipeline.	Former owners: F. C. Bock, W. Harness, W. H. Woods, W. Russell, G. H. Gass, B. Guinn, G. L. Donnelly, J. A. Martin.
11N/7E-8G1* (Sheet 23)	George C. Roeding, Jr.	Antelope Creek	Irrig.*	(*)	None	Approp.	0.11 cfs	A-12546[a]	1957	Pump; 10-hp gasoline engine with 0.2 mile of 3-inch pipe.	Location varies 600 feet of diversion point indicated. Previously irrigated 7 acres by sprinkler.
11N/7E-10H1 (Sheet 23)	Frank W. and Ora I. Crossley	Tributary to Secret Ravine	Irrig. Stock.	8 acres by flooding 10 head	25	Approp.	0.44 cfs	A-16326[a]	1949	Gravity; earth and rock dam 1 foot high, 6 feet long, with 0.2 mile of earth ditch.	
11N/7E-10P1 (Sheet 23)	R. E. and Ruby Horton	Secret Ravine	Irrig.	3 acres by furrow	3	Approp.	0.06 cfs	A-14410[a]	1939	Pump; 300 feet of 2-inch pipe.	Former owner: Ruby Horn.
11N/7E-11C1 (Sheet 23)	John E. Boyington	Tributary to Secret Ravine	Irrig. Stock.	18 acres by sprinkler* 60 head	51[f]	Riparian	--	--	1948	Pump; concrete dam 6 feet high and 5-hp electric motor with 0.2 mile of 6-inch pipe.	Area irrigated received supplemental supply from 11N/7E-11C2 and purchased water from Pacific Gas and Electric Company.
11N/7E-11C2 (Sheet 23)	John E. Boyington	Tributary to Secret Ravine	Irrig. Stock.	(*)	80*,[f]	Riparian	--	--	Prior 1957	Pump; 7.5-hp electric motor with short pipeline to connection with 11N/7E-11C1.	Amount diverted used to supplement 11N/7E-11C1.

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TABLE 3 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M O B & M					Rocklin Subunit (Continued)						
11N/7E-12C1 (Sheet 23)	June I. Maxwell Jossph and Gladys Kholas	Tributary to Secret Ravine	Irrig.	34 acres by flooding and sprinkler	Not meas.	Approp.*	0.38 cfs	A-14244[a]	1955	Gravity; 0.2 mile of earth ditch and 0.3 mile of 4-inch pipe.	Former owner: Robert M. Maxwell. Appropriative water right assigned to June I. Maxwell, Joseph and Gladys Kohles, and J. S. and B. J. Makimoto in 1958.
11N/7E-15B1 (Sheet 23)	David M. Takagishi	Tributary to Secret Ravine	Irrig.	4 acres by sprinkler*	Not meas.	Approp.	0.075 cfs	A-18587[a]	1957	Pump; 1-hp electric motor with 180 feet of 3-inch pipe.	Area irrigated received supplemental water purchased from Pacific Gas and Electric Company.
11N/7E-15D1 (Sheet 23)	Cecil and Soledad A. Black	Secret Ravine	Irrig. Stock.	3 acres by sprinkler 40 head	Not meas.	Approp.	0.13 cfs	A-15549[a]	1957	Pump; 5-hp electric motor with 0.1 mile of 4-inch pipe and 200 feet of 2-inch pipe.	Former owner: Leroy L. Mack.
11N/7E-16H1 (Sheet 23)	F. Comrie	Secret Ravine	Irrig.	6 acres by sprinkler	Not meas.	Approp.	0.31 cfs	A-12455[a]	Prior 1914	Pump; 5-hp electric motor with 0.2 mile of 4-inch pipe.	Former owners: W. F. Hacker, Cora E. Hacker, Department of Veterans Affairs.
11N/7E-16H2 (Sheet 23)	Noah and Gracie Morris*	Secret Ravine	Irrig. Stock.	9 acres by sprinkler 15 head	Not meas.	Riparian	--	--	1946	Pump; 3-hp electric motor with 0.2 mile of 4-inch pipe.	Ownership changed to Mrs. Gracia Vaughn in 1959.
11N/7E-16Q1 (Sheet 23)	Charles P. Croft	Tributary to Secret Ravine	Recr. Stock.	Fishing in reservoir 26 head	Not meas.	(b)	--	--	About 1910	Storage; earth dam	Former owner: Gold Hill Dredge Company.
11N/7E-17C1 (Sheet 23)	Antonio and Frances Montero	Antelope Creek	Irrig.	11 acres by sprinkler	35*	Approp.	0.11 cfs	A-14328[a]	1952	Pump; 5-hp electric motor with 0.2 mile of 2- and 3-inch pipe.	Reported amount diverted is for May - November 1958.
11N/7E-17M1 (Sheet 23)	Ralph B. and Julia H. Aitken	Antelope Creek	Irrig. Stock.	56 acres by sprinkler* 130 head	289[d]	Approp. Approp. Approp.	0.59 cfs 25 af 0.31 cfs	A-8015[a] A-13394[a] A-16437[a]	1935	Pumps and storage; earth dam 15 feet high, 400 feet long, with one 15-hp and two 7.5-hp electric-powered pumps and 0.4 mile of 5- and 6-inch pipe.	Portion of area irrigated received supplemental water purchased from Pacific Gas and Electric Company.
11N/7E-17P1 (Sheet 23)	Susis I. and W. F. Ross	Tributary to Secret Ravine	Irrig. Stock.	27 acres by sprinkler 35 head	15	Approp.	0.5 cfs	A-15910[a]	1916	Pump; 5-hp electric motor with 2-inch pipeline.	
11N/7E-19R1 (Sheet 23)	Guy Schoonderwoerd	Tributary to Secret Ravine	Irrig.	12 acres by sprinkler	22	Riparian	--	--	About 1950	Pump; 5-hp electric motor with 0.3 mile of 4-inch pipe.	
11N/7E-20G1 (Sheet 23)	Joe Doisa	Secret Ravine	Irrig. Stock.	22 acres by sprinkler and flooding 30 head	57	Approp.	0.12 cfs	A-7646[a]	1932	Pumps; 5- and 10-hp electric motors with 0.3 mile of 4-inch pipe.	
11N/7E-20J1 (Sheet 23)	I. C. Lewis L. E. Wyatt	Pennsylvania Ravine	Irrig. Stock.	28 acres by sprinkler 300 head	55	Approp.	0.06 cfs	A-3789[a]	1924	Pump; 3-hp electric motor with 0.4 mile of 4-inch pipe.	Former owner: George M. Dyke.

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DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Rocklin Subunit (Continued)						
11N/7E-20P1 (Sheet 23)	Ruben J. Ruhkala	Secret Ravine	Irrig.	9 acres by sprinkler	15	Approp.	0.5 cfs	A-15318[a]	1953	Pump; 7.5-hp electric motor with 0.2 mile of 6-inch pipe and 0.1 mile of 2-inch pipe.	
11N/7E-20P2 (Sheet 23)	George L. and Marion E. Robson	Pennsylvania Ravine	Irrig. Stock.	5 acres by sprinkler --	11	Approp.	0.14 cfs	A-16205[a]	1956	Pump; 5-hp electric motor with 0.2 mile of 3-inch pipe.	
11N/7E-20P3 (Sheet 23)	Gordon I. and Beth L. Gulbranson	Secret Ravine	Irrig.	12 acres by sprinkler and flooding	61*	Approp.	0.3 cfs	A-17300[a]	1956	Pump; 10-hp electric motor with 0.2 mile of 4-inch pipe.	Former owner: Hodges. Reported amount diverted is for 1958.
11N/7E-21J1 (Sheet 23)	Jack Omohundro	Tributary to Dutch Ravine	Stock. Recr.	200 head --	Not meas.	(b)	--	--	1947	Storage; earth dam 22 feet high, 640 feet long.	Reservoir received supplemental water purchased from Pacific Gas and Electric Company.
11N/7E-22N1 (Sheet 23)	Jack Omohundro	Tributary to Dutch Ravine	Stock. Recr.	200 head --	Not meas.	(b)	--	--	1956	Storage; earth dam 20 feet high.	Reservoir received supplemental water purchased from Pacific Gas and Electric Company.
11N/7E-23J1 (Sheet 23)	O'Farrell Welch	Tributary to Miners Ravine	Recr. Stock.	(*)	(*)	Approp.	10 af	A-13718[a]	1950	Storage; earth dam 15 feet high, 500 feet long.	No use in 1957.
11N/7E-25N1 (Sheet 23)	Granite Lake Lakeview Hills Association	Tributary to Miners Ravine	Recr.	Boating and fishing in reservoir*	Not meas.	Approp.*	0.2 cfs 47 af	A-16650[a]	1955	Storage; earth dam 20 feet high, 550 feet long.	Received supplemental supply from 11N/7E-35A2 and purchased water from Pacific Gas and Electric Company. Appropriative water right in name of J. A. Beek.
11N/7E-27L1 (Sheet 23)	Edward J., Boy, and K. Brown	Tributary to Miners Ravine	Irrig. Stock.	33 acres by sprinkler 50 head	38	Approp.	0.31 cfs	A-4026[a]	1924	Pump; 7.5-hp electric motor with 0.2 mile of pipe.	Former owners: J. H. Meadows, T. K. Holmes, R. E. Rugg, E. I. Yates, S. N. Cottrell.
11N/7E-27M1 (Sheet 23)	Myron J. and Mona Stephens	Tributary to Miners Ravine	Irrig. Stock.	11 acres by sprinkler and flooding 50 head	Not meas.	Approp.	0.75 cfs 10 af	A-11258[a]	1946	Storage and pump; earth dam 8 feet high, 200 feet long, with a 3-hp electric-powered pump and 0.2 mile of 2-inch pipe and earth ditch.	Former owners: G. F. Cane, M. F. Adams, H. W. Smith.
11N/7E-34H1 (Sheet 23)	Harold E. Wentsch Thomas J. Kelley	Tributary to Miners Ravine	Irrig. Stock. Recr.	23 acres by sprinkler 24 head Fishing	Not meas.	Approp.	38 af 16 af	A-13839[a] A-15077[a]	About 1950	Storage and pump; earth dam 14.5 feet high, 625 feet long, with a 20-hp electric-powered pump and 0.5 mile of 6-inch pipe.	Former owners: Verner G. and Elma E. Kokila.
11N/7E-35A1 (Sheet 23)	Cottonwood Lake Hidden Valley Community Assn.	Miners Ravine	Stock. Recr.	30 head* Fishing, boating and swimming	Not meas.*	Approp.*	0.3 cfs 56 af	A-13419[a]	About 1950	Gravity and storage; earth dam with 0.2 mile of earth ditch to 11N/7E-35K1.	Amount diverted supplemented by water purchased from Pacific Gas and Electric Company. Appropriative water right in name of J. A. Beek.
11N/7E-35A2 (Sheet 23)	Lakeview Hills Assn.	Miners Ravine	Domestic	(*)	Not meas.*	Approp.*	0.20 cfs 47 af	A-16650[a]	About 1950	Pump; electric motor with 6-inch pipeline.	Diversion used to supply urban tract. Amount diverted supplemented by water purchased from Pacific Gas and Electric Company. Appropriative water right in name of J. A. Beek.

* See remarks.
** For additional information see Appendix D, "Detailed Descriptions of Certain Surface Water Diversions".
-- Information not available.
For lettered footnotes, see last page of table.

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Rocklin Subunit (Continued)						
11N/7E-35K1 (Sheet 23)	Hidden Valley Community Assn.	Miners Ravine	Stock. Recr.	30 head* Fishing, boating and swimming	Not meas.	Approp.*	1.0 cfs 18 af	A-14525[a]	About 1950	Pump and storage; concrete dam 4 feet high, 20 feet long, and pump with 1.5 miles of 6-inch pipe to connection with 11N/7E-35A2.	Amount diverted supplemented by water purchased from Pacific Gas and Electric Company. Appropriative water right in name of J. A. Beek.
11N/8E-6H1 (Sheet 23)	Basil T. Rogers	Miners Ravine	Irrig.	4 acres by sprinkler*	Not meas.	Approp.	0.05 cfs	A-11565[a]	1946	Pump; 1.5-hp electric motor with 0.2 mile of 1.5-inch pipe.	Area irrigated receives supplemental water purchased from Pacific Gas and Electric Company.
11N/8E-6Q1 (Sheet 23)	Mrs. Martha A. Brennan	Miners Ravine	Irrig.	10 acres by furrow*	Not meas.	Riparian	--	Patent	Prior 1870	Pump; concrete dam 6 feet high, 15 feet long, with a 3-hp electric-powered pump and 150 feet of 3-inch pipe and earth ditch.	Former owners: Owen King, J. J. Brennan. Area irrigated received supplemental water purchased from Pacific Gas and Electric Company.
11N/8E-7B1 (Sheet 23)	Mrs. Alice Day	Miners Ravine	Irrig.	10 acres by furrow*	15[d]	Approp.	0.25 cfs	A-17414[a]	1957	Pump; earth dam 4 feet high, 20 feet long, with a 5-hp electric-powered pump and 300 feet of 1.5-inch pipe.	Former owners: Mason, Cottle. Area irrigated received supplemental water purchased from Pacific Gas and Electric Company.
11N/8E-7N1 (Sheet 23)	Frank Poirier	Tributery to Miners Ravine	Irrig.	17 acres by sprinkler	Not meas.	(b)	--	--	1953	Pump and storage; earth dam 12 feet high, 600 feet long, and pump with 0.1 mile of 4-inch pipe.	
11N/8E-18B1 (Sheet 23)	Dwight Brown	Miners Ravine	Irrig. Stock. Recr.	39 acres by sprinkler and flooding 40 head Boating and fishing in reservoir	43	(b)	--	--	1945	Pump and storage; earth dam 20 feet high, 450 feet long, and 5-hp electric-powered pump with 0.2 mile of 6-inch pipe.	
12N/7E-29N1 (Sheet 22)	James S. McAdoo	Tributary to Antelope Creek	Irrig.	14 acres by flooding	Not meas.	Riparian	--	--	About 1944	Gravity; earth dam 3 feet high, 10 feet long, with 0.4 mile of earth ditch.	Former owner: W. E. Ashley.
12N/7E-32N1 (Sheet 22)	Ervan F. Draper John H. Carr	Tributary to Antelope Creek	Irrig.	6 acres by flooding	Not meas.	Approp.	0.037 cfs	A-1778[a]	1920	Gravity; earth dam with short earth ditch.	Former owners: Frank Edgar, H. C. and M. E. Jackson, C. H. and M. J. Oakley, M. G. Thevenent.
12N/7E-33E1 (Sheet 22)	Arthur L. Traylor	Antelope Creek	Irrig. Stock.	19 acres by sprinkler 45 head	41	Riparian	--	--	About 1922	Pump; 5-hp electric motor with 3-inch pipe.	
12N/7E-36E1 (Sheet 22)	Theodore M. Navae	Secret Ravine	Irrig. Stock. Domestic	11 acres by sprinkler 44 head (c)	Not meas.	Approp.	0.19 cfs	A-5413[a]	1927	Pump; 3-hp electric motor with 0.4 mile of 1.5-, 2-, and 3-inch pipe.	

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Rocklin Subunit (Continued)						
12N/7E-36M1 (Sheet 22)	Brian B. and Emma Mae Hughes*	Secret Ravine	Irrig.	8 acres by sprinkler and flooding	38	Approp.	0.22 cfs*	A-548[a]	1916	Pump; 5-hp electric motor with 0.2 mile of 2- and 4-inch pipe.	Ownership changed to Calvin Burnside and George K. Anderson in 1959. Former owners: M. J. Pullen, M. Gladden, H. S. McGowan, M. Schnabel, California Lands, Inc., A. Patton, J. K. Dale, E. A. Reed, L. Neufield, M. Carter, F. Morgan. Water right amount includes that which may be diverted by 12N/7E-36N1.
12N/7E-36N1 (Sheet 22)	John A. Patton	Secret Ravine	Irrig.	6 acres by sprinkler	9	Approp.	0.22 cfs*	A-548[a]	1916	Pump; 0.1 mile of 4- and 5-inch pipe.	Former owners: M. J. Pullen, M. Gladden, H. S. McGowan, M. Schnabel, California Lands, Inc., A. Patton, J. K. Dale, E. A. Reed, L. Neufield, M. Carter, F. Moran. Water right amount includes that which may be diverted by 12N/7E-36M1.
					Sierra City Subunit						
19N/11E-6F1 (Sheet 7)	C. P. and J. K. Heilman	San Juan Canyon	Domestic Power Fire Prot.	25 persons 8 kilowatts	Not meas.	Approp.	0.05 cfs	A-11106[a]	Prior 1914	Gravity; log dam 5 feet high, 25 feet long, with 0.4 mile of ditch and flume.	Former owners: Jean L. Heinrich, E. W. Engs, Britt.
20N/11E-25D1 (Sheet 5)	Edward J. Fournier	Ladies Canyon	Irrig. Power	18 acres by sprinkler and flooding 3 kilowatts	Not meas.	Approp.	--	--	About 1850	Gravity; concrete dam with 0.1 mile of 6-inch pipe and 1.0 mile of earth ditch.	Former owners: G. H. Hale, F. E. Fournier, H. J. Fournier.
20N/12E-5P1 (Sheet 5)	Packer Lake Sierra Buttes Canal and Water Company	Tributary to Salmon Creek	Recr.	Fishing and boating	Not meas.	Approp.	--	--	1885	Storage; earth and rock dam 11 feet high, 90 feet long.	
20N/12E-9K1 (Sheet 5)	Upper Sardine Lake Sierra Buttes Canal and Water Company	Sardine Creek	Recr.	Fishing	Not meas.	Approp.	--	--	1885	Storage; earth and rock dam 26 feet high, 180 feet long.	
20N/12E-10E1 (Sheet 5)	Lower Sardine Lake Sierra Buttes Canal and Water Company.	Sardine Creek	Recr.	Fishing and boating	Not meas.	Approp.	--	--	1885	Storage, log and timber dam 5 feet high, 100 feet long.	
20N/12E-22R1 (Sheet 5)	Albert Anderson	North Yuba River	Irrig. Stock.	15 acres by flooding 40 head	Not meas.	Approp.	0.125 cfs	A-11501[a]	About 1850	Gravity; rock dam with 1.0 mile of earth ditch and flume.	Former owners: Zorroco, Noble, Anderson.
20N/12E-30H1 (Sheet 5)	Amy Wear Westall	Colombo Ravine	Domestic Power	5 connections 3 kilowatts	Not meas.	Riparian	--	--	About 1889	Gravity; 0.6 mile of earth ditch and flume.	Former owner: Kaiser.

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TABLE 8 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Sierra City Subunit (Continued)						
21N/12E-28L1 (Sheet 3)	Lower Salmon Lake Sierra Buttes Canal and Water Company	Salmon Creek	Recr.	Fishing	Not meas.	Approp.	--	--	1885	Storage; earth and rock dam 16 feet high, 360 feet long.	
21N/12E-29H1 (Sheet 3)	Upper Salmon Lake Sierra Buttes Canal and Water Company	Salmon Creek	Recr.	Fishing and boating	Not meas.	Approp.	--	--	1885	Storage; rock dam 13 feet high, 70 feet long.	
					Washington Subunit						
18N/10E-29P1 (Sheet 10)	Mason J. Meredith	Humbug Creek	Irrig. Stock. Power Domestic	23 acres by flooding 80 head 1 kilowatt (c)	317	Approp.	150 MI	Book 1 Pg. 84g of Water Rights	1875	Gravity; concrete dam 4 feet high, 15 feet long, with 0.6 mile of earth ditch and flume.	Former owners: F. DeBour, Fontz, Luther.
18N/10E-31H1 (Sheet 10)	North Bloomfield Community System	Humbug Creek	Munic.	40 persons*	103*	(b)	--	--	About 1870	Gravity; log dam 6 feet high, 30 feet long, with 0.7 mile of earth ditch and 0.4 mile of 11-inch pipe.	Former owners: Malakoff Mines, San Juan Gold Mining Company. Supplies community of North Bloomfield. Reported amount diverted is for 1958.
18N/10E-31P1 (Sheet 10)	Cordalia Coombes	Tributary to Humbug Creek	Irrig.	7 acres by flooding	Not meas.	Riparian	--	--	About 1850	Gravity; earth and rock dam 1 foot high, 4 feet long, with 0.4 mile of earth ditch.	Former owners: Blaine, Davidson.
					Wolf Creek Subunit						
14N/8E-5J1 (Sheet 20)	J. M. Walkenhorst, Jr.	Wolf Creek	Irrig.	(*)	None	Approp.	150 MI	Book 1, Pg. 172 of Water Rights	1877	Gravity; earth dam 2 feet high, 40 feet long, with 0.4 mile of earth ditch.	Former owners: Thompson, Helen D. Avery, Pharo, Tobiassen, Wassley. Irrigated 5 acres by flooding and supplied stock water until 1957.
14N/8E-5J2 (Sheet 20)	C. R. and M. L. Milham	Wolf Creek	Irrig. Stock.	13 acres by flooding 90 head	356*	Approp.	0.5 cfs	A-10615[a]	About 1850	Gravity; plastic-covered, rock, log, and earth dam 2 feet high, 70 feet long, with 1.1 miles of earth ditch.	Former owners: Handy Family, Robert Cole, T. W. and T.M. Whitney, L. M. and Hazel Troxel, Bates, Tom L. Pappas, Avery, Walk. Reported amount diverted is for 1958.
14N/8E-9L1 (Sheet 20)	Ted C. Buck	Wolf Creek	Irrig. Stock.	178 acres by sprinkler --	Not meas.	(b)	--	--	Prior 1957	Gravity; 1.6 miles of earth ditch.	
14N/8E-17L1 (Sheet 20)	C. H. and Bernice C. Robinson	Long Hollow Ravine	Irrig.	5 acres by flooding and sprinkler	Not meas.	Approp.	0.05 cfs	A-15879[a]	1955	Pump; 1.5-hp electric motor with 0.2 mile of 2-inch pipe.	

* See remarks.
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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Wolf Creek Subunit (Continued)						
14N/8E-20G1 (Sheet 20)	Carl C. Wollam	Long Hollow Ravine	Irrig.	4 acres by flooding	Not meas.	Approp.	0.5 cfs	A-17942[a]	About 1926	Gravity; concrete dam 2 feet high, 36 feet long, with 0.1 mile of earth ditch.	
14N/8E-20K1 (Sheet 20)	Dennis and Muriel Jones	Wolf Creek	Irrig.	17 acres by flooding and sprinkler*	Not meas.	Approp.	120 MI	--	About 1850	Pump; 45-hp diesel engine with 120 feet of 6-inch pipe.	Former owners: Jones, Hargis, Harndon. Area irrigated received supplemental water purchased from Nevada Irrigation District.
14N/8E-20R1 (Sheet 20)	Murray and Edith E. Young	Ragsdale Creek	Irrig. Stock.	3 acres by flooding 14 head	Not meas.	Approp.	0.3 cfs	A-17430[a]	About 1950	Gravity; concrete dam 4 feet high, 8 feet long, with 0.1 mile of earth ditch.	Former owner: John Skove.
14N/8E-21R1 (Sheet 20)	P. T. Clay	Ragsdale Creek	Irrig. Stock.	4 acres by flooding and sprinkler* 20 head	19[f]	Riparian	--	--	1955	Pump; 7.5-hp electric motor with short 4-inch pipeline.	Area irrigated received supplemental water purchased from Nevada Irrigation District.
14N/8E-22P1 (Sheet 20)	Daniel O. and M. W. Newton	Ragsdale Creek	Irrig. Stock. Recr.	55 acres by sprinkler* 100 head Fishing and swimming in reservoir	20[d]	Aoprop.	20 af	A-17258[a]	1914	Gravity and storage; earth dam 22 feet high, 250 feet long, with 0.2 mile of earth ditch.	Former owner: Hoefer. Area irrigated received supplemental water purchased from Nevada Irrigation District. Portion of reported area irrigated is located in Combie Subunit.
15N/8E-3E1 (Sheet 18)	George and Charles Smith	Tributary to French Ravine	Irrig.	18 acres by flooding	Not meas.	Riparian	--	Deed	About 1922	Gravity; 0.1 mile of earth ditch.	Former owner: MacDonald.
15N/8E-9K1 (Sheet 18)	French Ravine Ditch Nevada Irrigation District	French Ravine	Irrig. Stock. Domestic	(j)	215*	(b)	--	--	Prior 1957	Gravity; masonry dam 4 feet high, 50 feet long, with 0.4 mile of earth ditch to connection with 15N/8E-10R1.	Reported amount diverted is total for April - December only. Amount diverted enters 15N/8E-10R1 (Tarr Ditch) for distribution.**
15N/8E-10R1 (Sheet 18)	Tarr Ditch* Nevada Irrigation District	Wolf Creek	Irrig. Stock. Domestic	(j)	20,678*	Adjud.	(*)	Par. 2[i]	1858	Gravity; timber dam 10 feet high, 40 feet long, with 45.0 miles of pipe, flume, and earth ditch.	Former owner: New Blue Point Mining Co. Reported amount diverted is for April 1957 - March 1958 and includes supplemental water from releases upstream. Formerly known as Nevada Reservoir Ditch, New Blue Point Ditch, and Campbell Ditch. No diversion 1901-1912. Water right amount includes all water imported to Wolf Creek by owner and natural waters not required by downstream users.**
15N/8E-12P1 (Sheet 18)	Mrs. Katie M. Wheeler	Rattlesnake Creek	Irrig.	12 acres by furrow*	30[d]	Approp.	--	--	Prior 1913	Gravity; wood dam 1.5 feet high, 5 feet long, with 0.5 mile of earth ditch and wood flume.	Area irrigated received supplemental water purchased from Nevada Irrigation District.
15N/8E-13F1 (Sheet 18)	G. W. Brewer	Rattlesnake Creek	Irrig. Stock.	13 acres by furrow and flooding* 30 head	56[f]	Aoprop.	--	--	Prior 1913	Gravity; dam 15 feet high, 125 feet long, with a short earth ditch.	Former owner: Cunningham, Bree. Area irrigated received supplemental water purchased from Nevada Irrigation District.
15N/8E-14J1 (Sheet 18)	J. H. Ball	Rattlesnake Creek	Irrig. Stock.	20 acres by flooding 50 head	19[f]	Riparian	--	--	Prior 1957	Gravity; timber dam 2 feet high, 4 feet long, with 0.6 mile of earth ditch.	Former owner: Eames.

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TABLE 6 (Continued)

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YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Wolf Creek Subunit (Continued)						
15N/8E-15M1 (Sheet 18)	H. O. Pingree	Wolf Creek	Irrig. Stock.	12 acres by flooding 100 head	132	Adjud.	75 MI	Par. 5[1]	About 1850	Gravity; rock dam 2 feet high, 35 feet long, with 0.2 mile of earth ditch.	Former owner: Parker P. Pingree.
15N/8E-22E1 (Sheet 18)	D. M. Mefford	Wolf Creek	Irrig. Stock.	19 acres by flooding 60 head	238	Adjud.	75 MI	Par. 7[1]	About 1887	Gravity; log dam 4 feet high, 30 feet long, with 0.9 mile of earth ditch.	Former owner: C. A. Sammons.
15N/8E-22L1 (Sheet 18)	Leo Flury	Rattlesnake Creek	Irrig.	5 acres by flooding	37	Riparian	--	--	About 1890	Gravity; rock dam with 0.2 mile of earth ditch.	Former owner: Rheinhardt.
15N/8E-22M1 (Sheet 18)	J. W. Stevenson*	Wolf Creek	Irrig. Stock.	142 acres by flooding* 350 head	1,477	Adjud.	123 MI	Par. 6[1]	About 1850	Gravity; concrete dam 3 feet high, 25 feet long, with 4.8 miles of earth ditch.	Ownership changed to Robert D. and Norman T. Shine in 1959. Former owners: H. B. Smith, M. B. and M. W. Church, Max Arnold, Tahoe Sugar Pine Company. Area irrigated received supplemental water purchased from Nevada Irrigation District.
15N/8E-22P1 (Sheet 18)	Leo Flury	Rattlesnake Creek	Irrig.	6 acres by flooding	360	Riparian	--	--	About 1890	Gravity; rock dam with 0.1 mile of earth ditch.	Former owner: Rheinhardt.
15N/8E-22R1 (Sheet 18)	Yale H. Jordan	Tributary to Rattlesnake Creek	Irrig.	4 acres by flooding	Not meas.	Riparian	--	Deed	About 1880	Gravity; earth dam 3 feet high, with 0.1 mile of earth ditch.	Former owner: Reuter.
15N/8E-23N1 (Sheet 18)	Victor Garofalo	Tributary to Rattlesnake Creek	Irrig.	43 acres by flooding*	146	(b)	--	--	Prior 1957	Gravity; earth dam 15 feet high, 300 feet long, with 0.5 mile of earth ditch.	Former owner: Judge Snell. Area irrigated received supplemental water purchased from Nevada Irrigation District.
15N/8E-27C1 (Sheet 18)	D. M. Mefford	Rattlesnake Creek	Irrig. Stock.	7 acres by flooding 60 head	191	Approp.	--	Deed	About 1887	Gravity; timber and rock dam 1 foot high, 10 feet long, with 0.4 mile of earth ditch.	Former owner: Sammons.
15N/8E-28A1 (Sheet 18)	Andrew H. Harvey	Wolf Creek	Irrig. Stock.	79 acres by flooding 75 head	1,086	Adjud.	75 MI	Par. 1[1]	About 1850	Gravity; earth and rock dam with 3.5 miles of earth ditch.	Former owners: Tom and John Sleeman, Louis Sleaman.
15N/9E-17M1 (Sheet 18)	Charles A. Morandi	South Wolf Creek	Irrig. Stock.	7 acres by flooding 100 head	Not meas.	Riparian	--	--	About 1870	Gravity; two small earth and log dams with 0.2 mile of earth ditch.	Former owners: Antoine Pettit, Louisa Tang.
15N/9E-18P1 (Sheet 18)	Charles A. Morandi	Woodpecker Creek	Irrig. Stock.	19 acres by flooding 50 head	Not meas.	Riparian	--	--	About 1890	Gravity; four small earth and log dams with 0.2 mile of earth ditches.	Former owners: Antone Beulaque, Louis Beulaque.
15N/9E-18R1 (Sheet 18)	Antone Rondoni	South Wolf Creek	Irrig. Stock. Domestic	5 acres by flooding 20 head (c)	Not meas.	Approp.	--	Book 43 of Deeds Pg. 305&	About 1880	Gravity; earth and log dam 4 feet high, 20 feet long, with 0.2 mile of earth ditch.	

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TABLE 6 (Continued)

DESCRIPTIONS OF SURFACE WATER DIVERSIONS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Location number and Plate 2 sheet number	Diversion name and/or owner	Source	Water use in 1957			Apparent water right			Indicated date of appropriation or first use	Description of diversion system	Remarks
			Purpose	Extent and method of use	Amount diverted in acre-feet	Type	Amount	Reference			
M D B & M					Wolf Creek Subunit (Continued)						
15N/9E-30E1 (Sheet 18)	C. E. Newman	South Wolf Creek	Stock.	150 head	Not meas.	(b)	--	--	About 1920	Storage; concrete dam 15 feet high, 100 feet long.	
16N/8E-24K1 (Sheet 16)	Malcolm Hammill	Tributary to Wolf Creek	Irrig. Stock.	54 acres by flooding 60 head	150	Riparian	--	--	1927	Gravity; timber and earth dam, 3 feet high, 6 feet long, with 0.7 mile of earth ditch.	Former owners: Macarey, Idaho-Maryland Mining Corporation, McBoyle.
16N/8E-25A1 (Sheet 16)	Idaho-Maryland Ditch Oro Lumber Co.	Wolf Creek	Indust.	Lumber Millpond	50	(b)	--	--	Prior 1957	Gravity; 1.6 miles of earth ditch.	Former owner: Idaho-Maryland Mining Co.
16N/8E-25C1 (Sheet 16)	Stone Ditch Nevada Irrigation District	Wolf Creek*	Irrig. Indust.*	(j)	Not meas.	(*)	(*)	--	Prior 1914	Gravity; wood dam 2 feet high, 6 feet long, with 1.0 mile of earth ditch.	Stream flow of Wolf Creek augmented by releases upstream. Industrial use consists of supply to Pacific Gas and Electric Company gas plant at Grass Valley, delivered by Nevada Irrigation District under a 15 MI appropriation claimed by Pacific Gas and Electric Company.**
16N/8E-26G1 (Sheet 16)	Manuel Gallino	Wolf Creek	Irrig. Stock.	12 acres by flooding and sprinkler 28 head	Not meas.	Approp.	--	--	About 1880	Gravity; timber and rock dam, 2 feet high, 30 feet long, with 0.6 mile of earth ditch.	Former owners: Drew, Gesch.
16N/8E-26P1 (Sheet 16)	Newmont Mining Co.	South Fork Wolf Creek	Irrig. Stock. Mining	11 acres by sprinkler 25 head (*)	Not meas.	Approp.	--	--	About 1880	Pump; 7.5-hp electric motor with short 3-inch pipeline.	Former owner: Empire Mine. Supplied stamp mill until 1957.
16N/8E-26R1 (Sheet 16)	Newmont Mining Co.	South Fork Wolf Creek	Irrig. Stock.	14 acres by flooding 20 head	Not meas.	Approp.	--	--	About 1880	Gravity; timber dam 3 feet high, 8 feet long, with 0.6 mile of earth ditch.	

* - See remarks.
** - For additional information see Appendix D, "Detailed Descriptions of Certain Surface Water Diversions".
-- - Information not available.
e - Placer County Records of Water Rights.
f - Amount includes purchased water.
g - Nevada County Records.
h - Sierra County Records.

The actual amount of the right, if established and known, and a reference to the source of data are also included. Although this information is believed to be accurate, it is emphasized that it is not based on sworn claims or testimony and should in no way be construed to represent a conclusive determination of water rights.

Diversions for which the apparent water rights are based on adjudication are listed as "adjudicated," and those based on appropriative rights are listed as "appropriative." Those which have been neither adjudicated nor based on appropriation, but for which the area of use is apparently riparian to the stream or the owner claims such, are listed as "riparian." Diversions listed as adjudicated or appropriative may also be riparian, although no attempt was made in such cases to determine the riparian status.

In the case of an adjudicated right, the amount of the decreed right is tabulated. For an appropriative right, the amount tabulated is that found in the filing, if any, or in the application, or in the latest permit or license which may have been issued in connection with the application. The reference given for an appropriation initiated after the effective date of the Water Commission Act (1914) is the number of the application on file with the State Water Rights Board. For appropriations prior to 1914, the reference, if known, is the book and page number of the official county record in which the filing is recorded. Such filings were made in accordance

with Sections 1410 and 1422 of the Civil Code, as enacted in 1872, which preserved the priority of a diligent appropriator from the time of filing and enabled him to prevail over a concurrent nonstatutory appropriator. When a mention of the water right is made in the patent or deed of the property, and if no other reference is known, either "patent" or "deed" is given as a reference.

Detailed information with respect to diversions which could not be adequately presented in Table 6 is included in Appendix D. The information relates to diversions by Browns Valley Irrigation District, Nevada Irrigation District, and Pacific Gas and Electric Company.

Records of Surface Water Diversions

Continuous or periodic measurements of surface water diversions were made by the Department of Water Resources during part or all of the years 1957 and 1958 whenever it was feasible to measure the flows. Most of the diversions for nonagricultural uses and some of those used for agriculture are operated throughout each year. Substantially all diversion measurements were started in March or April of 1957, prior to the commencement of intensive irrigation, and the measurements were continued through the irrigation season. Measurements of the year-round diversions were continued into 1958 to obtain a

complete year of record, and diversions for which measurements were not started until late in 1957 were measured through 1958. A few diversions were located at a late stage in the survey, and no measurements or estimates of these were attempted. Results of the measurement program are summarized in five tables. Table 7 presents monthly records of surface water diversions of individual diverters; Table 8 presents monthly records of surface water diversions by Nevada Irrigation District; Table 9 presents monthly records of surface water diversions by Pacific Gas and Electric Company; Table 10 presents monthly records of surface water imports and exports; and Table 11 presents monthly records of miscellaneous streamflows required for computing consumptive use. Measurements of each diversion were made at a location above the area of first use and as close to the diversion intake as possible, but below any regulatory spill. Exceptions are noted in the tables.

Determinations of diverted quantities were made primarily by measurement of open channel flow and by testing of pumps. Periodic current meter measurements of open channel flow were made during the diversion season to obtain channel ratings. The water surface stage was recorded either by weekly observations of a staff gage or with a continuous water stage recorder, from which quantities of flow were calculated. Existing weirs were used whenever available. These observations were supplemented by interview of water users to obtain additional staff gage readings

and to obtain data on possible abrupt changes in operations between readings. On some diversions, where measurements were normally made by the diverter, the records were obtained from the diverter.

The values in Tables7 through 11 are based on various methods listed in the column entitled, "Method of observation and calculation." When the monthly data were sufficiently reliable, monthly values are shown. When the diversion for a given period is known to have been zero, it is so indicated. The data, however, were sometimes not sufficiently detailed to justify a breakdown into monthly values. When data were incomplete or uncertain, they are designated as estimates. Notations regarding the extent of irrigation period indicate the overall period of irrigation, but not necessarily that daily or continuous irrigation was practiced through the period. Notations that a stream source was "dry" at a certain time indicate that streamflow was so low as to make diversion infeasible.

TABLE 7

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet													Remarks
					Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
N O B & N																		
					Alleghany Subunit													
					(No diversions measured)													
					Auburn Ravine Subunit													
12N/6E-13A1	Nemphill Ditch	Irrigation 6/1/57 - 10/12/57 and stockwatering	At intake	Water stage recorder and depth-flow relationship	1957	0	0	0	0	0	182	285	251	120	58	0	0	896	
12N/7E-9P1	Miss Ethel Mulligan	Irrigation May - September 1957	At pump	Pump test and power records	1957	0	0	0	0	0	1	5	3	2	0	0	0	11	
12N/7E-13G1	Charles A. Nuestis	Irrigation 6/5/57 - 9/20/57, poultry watering and recreation	At intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	27	46	71	44	-	-	-	188*	Reported total is for 1/1/57 - 9/20/57 only. Small undetermined amount diverted after period of irrigation
12N/7E-16N1	Frank H. Newcomb	Irrigation 4/1/57 - 10/5/57 and stockwatering	0.1 mile below reservoir	Staff gage and depth-flow relationship	1957	0	0	0	13	14	15	22	32	27	4	-	-	127*	Reported total is for 1/1/57 - 10/5/57 only.
12N/7E-18D1	Frank E. Conley	Irrigation 5/6/57 - 10/3/57 and stockwatering	At pump	Pump test and power records	1957	0	0	0	0	19	30	32	33	25	2	0	0	131	
12N/7E-19A1	Elmer A. and Mattie Van Dyke Johnson	Irrigation 5/15/57 - 9/10/57, stockwatering, and recreation	At area of use	Estimated	1957	-	-	-	-	-	-	-	-	-	-	-	-	50	
12N/7E-21C1	Ray and Lillian LaFaille	Irrigation 5/1/57 - 9/27/57 and stockwatering	Near intake	Staff gage and depth-flow relationship	1957	-	-	-	-	16*	21*	18*	8	10*	-	-	-	73*	Reported total is for 5/1/57 - 9/27/57 only. Amounts for May - July and September partially estimated.
12N/7E-23M1	Robert P. Rich	Irrigation 5/23/57 - 10/31/57 and stockwatering	Near intake	Staff gage and depth-flow relationship	1957	0	0	0	0	14*	55	75	84	78	70	20*	26*	422	Reported amounts for May, November and December partially estimated.
12N/7E-23F1	Paul and Elizabeth Ripley	Irrigation	At pump	Pump test and power records	1957	0	0	0	0	1	8	6	7	4	1	0	0	28	
					1958	0	0	0	2	5	4	5	6	5	4	0	0	31	
12N/7E-23N1	J. W. and Nellie E. Dieterich Joe Varni	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	1	2	6	7	7	7	2	0	0	32	
12N/7E-24A1	Marrill H. Carlton	Irrigation 6/5/57 - 10/24/57	Near intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	54	54	33	36	29	0	0	206	
12N/7E-24F1	C. L. Dimmler	Irrigation 6/19/57 - 11/13/57 and stockwatering	0.1 mile below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	6	15	14	11	4	2	0	52	
12N/8E-3F1	George Scorinakis	Irrigation	At pump	Pump test and power records	1957	0	0	0	0	0	2	7	5	1	0	0	0	15	

* See remarks
** Estimated
\- Monthly value unknown

TABLE 7 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet													Remarks
					Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
M D & M				Auburn Ravine Subunit (Continued)															
12N/8E-5K1	Milt Renfree	Irrigation 5/1/57 - 10/1/57, domestic, and stockwatering	0.1 mile below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	28	23	13	27	27	0	0	0	118	
12N/8E-10F1	Everett M. Ludwig	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	0	1	2	4	4	3	0	0	0	14	
12N/8E-17B1	G. G. Johnson	Irrigation 6/1/57 - 10/31/57	At intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	43	27	28	33	76	0	0	207	
12N/8E-18B1	Jamison Ditch	Irrigation 5/10/57 - 10/31/57	0.2 mile below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	15	15	11	6	13	5	0	0	65	
12N/8E-18G1	Roland C. Lapp	Irrigation	At pump	Pump test and power records	1957	0	0	0	0	1	3	6	7	3	1	0	0	21	
12N/8E-18Q1	Roland C. Lapp	Irrigation 6/5/57 - 9/12/57	At intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	9*	7	10	4*	0	0	0	30	Reported amounts for June and September partially estimated.
12N/8E-18R1	Roland C. Lapp	Irrigation	At intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	1**	1	1	0	0	0	0	3	
				Bullards Bar Subunit															
18N/7E-3J1 18N/7E-3K1	Lloyd Williams Alex Moran	Irrigation and domestic	1.0 mile below intake	Current meter and operation record	1957	17	15	17	16	26	26	26	26	26	17	16	17	245*	Reported amounts include all water diverted from the two diversion points
18N/8E-1M1	Camptonville Water Service	Municipal	At intake	Current meter and straight line prorate	1957	-	-	-	-	-	23	26	25	21	16	-	-	111*	Reported total is for 6/1/57 - 10/30/57 only.
18N/8E-8F1	Erle Pauley	Irrigation, domestic, stockwatering, and power	-	Estimated	1957	-	-	-	-	-	-	-	-	-	-	-	-	400	
19N/8E-28N1	Dr. E. A. Nelson	Irrigation	Near intake	Staff gage and depth-flow relationship	1957	-	-	-	-	-	-	46*	46	41	53*	-	-	186*	Reported total is for 7/1/57 - 10/30/57 only. Amounts for July and October partially estimated.
19N/8E-31G1	Fred N. Baker	Irrigation	0.1 mile below intake	Estimated	1957	-	-	-	-	-	-	-	-	-	-	-	-	185*	Reported total is for 6/15/57 - 9/30/57 only.
19N/8E-34B1	James and Frank Pendola	Irrigation and stockwatering	At intake	Staff gage and depth-flow relationship	1957	-	-	-	-	24*	104*	108*	103	87	24	-	-	450*	Reported total is for 5/25/57 - 10/17/57 only. Amounts for May, June and July partially estimated.
19N/8E-35J1	Julius A. Cassano	Irrigation 5/8/57 - 10/19/57 and stockwatering	At intake	Staff gage and depth-flow relationship	1957	-	-	-	-	14*	17*	18	18	17	10	0	0	94*	Reported total is for 5/8/57 - 10/31/57 only. Amounts for May and June partially estimated.

* See remarks
** Estimated
- Monthly value unknown

TABLE 7 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet												Remarks
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
M D B & M																			
						Camp Beale Subunit													
						(No diversions measured)													
						Camp Far West Subunit													
14N/7E-33C1	Kenneth J. Casper	Irrigation 5/15/57 - 10/30/57	At intake	Estimated	1957	-	-	-	-	-	-	-	-	-	-	-	-	138	
						Combie Subunit													
						(No diversions measured)													
						Coon Creek Subunit													
12N/7E-2Q1	Vincent H. Anderson	Irrigation 6/1/57 - 10/5/57	100 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	6*	6*	14	32	8	0	0	66	Reported amounts for June and July partially estimated.
12N/7E-4G1	John G. Mohammed	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	3	8	27	26	23	18	2	0	0	107	
12N/7E-12D1	Vincent H. Anderson	Irrigation 6/1/57 - 10/5/57	300 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	20**	21*	25	26	7	0	0	99	Reported amount for July partially estimated.
12N/7E-12H1	Joe L. Garcia	Irrigation 6/12/57 - 9/15/57	200 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	1**	10*	11	9	0	0	0	31	Reported amount for July partially estimated.
12N/8E-7F1	Manuel Jacinto	Irrigation and stockwatering	At intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	13*	15	16	20	12*	0	0	76	Reported amounts for June and October partially estimated.
12N/8E-7F2	Edward R. Forster	Irrigation 6/23/57 - 10/16/57 and stockwatering	25 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	4	13	6	13	10**	0	0	46	
13N/6E-29H1	Chamberlain Estate Company	Irrigation	At pump	Pump test and power records	1958	0	0	0	0	17	46	42	50	29	16	0	0	200	
13N/7E-16Q1	C. S. Barton	Irrigation 6/1/57 - 9/25/57 and stockwatering	0.9 mile below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	20**	23*	26	16	8	9*	10**	112	Reported amounts for July and November partially estimated.
13N/7E-19R1	Arthur B. Hopper	Irrigation 5/15/57 - 10/15/57 and stockwatering	150 feet above reservoir	Staff gage and depth-flow relationship	1957	0	0	0	0	0	1*	0	1	2	1	0	0	5	Reported amount for June partially estimated.
13N/7E-26J1	Take Hamasaki	Irrigation	At pump	Estimated	1957	0	0	0	0	0	-	-	-	-	0	0	0	15	

* See remarks
ee Estimated
\- Monthly value unknown

TABLE 7 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet													Remarks
					Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
M D B & M				Coon Creek Subunit (Continued)															
13N/7E-28K1	Frank C. McElroy	Irrigation 7/1/57 - 10/1/57 and stockwatering	100 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	0	22*	10	30*	0	0	0	62	Reported amounts for July and September partially estimated.
13N/7E-29B1	Edgar E. and Ina F. Pellet	Irrigation 5/1/57 - 9/30/57 and stockwatering	Near intake	Staff gage and depth-flow relationship	1957	0	0	0	0	30**	26*	26	28	43	0	0	0	153	Reported amount for June partially estimated.
13N/7E-30B1	Arthur B. Hopper	Irrigation 5/15/57 - 10/15/57 and stockwatering	300 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	3	4	4	2	0	0	0	0	13	
13N/7E-30G1	Arthur B. Hopper	Irrigation 5/15/57 - 10/16/57	150 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	1	1	1	1	1	0	0	5	
13N/7E-30Q2	Herman L. Robbins	Irrigation 5/18/57 - 10/20/57 and stockwatering	At intake	Staff gage and depth-flow relationship	1957	0	0	0	0	5**	9*	2	3	5	1	0	0	25	Reported amount for June partially estimated.
13N/7E-30R1	Earl G. Calkins	Irrigation and stockwatering	At pump	Estimated	1957	0	0	0	0	-	-	-	-	-	0	0	0	13	
13N/7E-31H1	Mrs. May Herold	Irrigation 5/1/57 - 12/31/57 and stockwatering	Near intake	Staff gage and depth-flow relationship	1957	-	-	-	-	120**	121*	156*	187	187	144	82*	84**	1,081*	Reported total is for May - December only. Amounts for June, July and November partially estimated.
13N/7E-32H1	Walter Allen	Irrigation and stockwatering	300 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	0	1*	1	2	3	3*	4**	14	Reported amounts for July and November partially estimated.
13N/7E-32H2	Walter Allen	Irrigation 6/1/57 - 10/2/57 and stockwatering	300 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	8*	12	21	24	30	31*	40**	166	Reported amounts for June and November partially estimated.
13N/7E-32K1	Walter Allen	Irrigation 6/1/57 - 10/2/57 and stockwatering	At intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	21*	14	19	12*	1**	-	-	67*	Reported total is for June - October only. Amounts for June and September partially estimated.
13N/7E-34A1	I. R. and Mary Souza	Irrigation 6/11/57 - 10/1/57	1.1 miles below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	13*	9	13	11	0	0	0	46	Reported amount for June artially estimated.
13N/7E-34G1	I. R. and Mary Souza	Irrigation	150 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	9*	14	20	12	0	0	0	55	Reported amount for June partially estimated.
13N/7E-35A1	Mrs. Mary G. Perreira	Irrigation 5/18/57 - 10/15/57 and stockwatering	100 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	10**	23*	31	38	31	8	0	0	141	Reported amount for June partially estimated.
13N/7E-36J1	Stanley J. and Betty R. Samson	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	0	1	4	7	8	5	0	0	0	25	
13N/8E-26F1	Don L. and Lillian D. Castle	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	0	1	6	8	8	7	0	0	0	30	
13N/8E-34F1	James E. and Elsie W. Webb	Irrigation and stockwatering	--	Estimated	1957	0	0	0	0	-	-	-	-	-	0	0	0	33	

* See remarks
** Estimated
\- Monthly value unknown

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet: Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Remarks
M D B & M																			
				Coon Creek Subunit (Continued)															
13N/8E-34N1	Alvin W. Musso	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	0	0	2	4	6	3	1	0	0	16	
					1958	0	0	0	0	4	6	6	4	6	4	0	0	30	
				Deer Creek Subunit															
16N/6E-24L1	Donald and Charles Staples	Irrigation and stockwatering	0.8 mile below intake	Staff gage and depth-flow relationship	1957	0	0	0	1**	6**	14**	12**	17	9	2	0	0	61	
16N/7E-21N1	Roy Van Tiger	Irrigation and stockwatering	75 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	2**	60*	67	64	75*	55**	0	0	323	Reported amounts for June and September partially estimated.
					1958	0	0	0	0	39	62	76	68	57	29	0	0	331	
16N/7E-22N1	Roy Van Tiger	Irrigation and stockwatering	At intake	Staff gage and depth-flow relationship	1957	0	0	0	0	5**	21*	34	32	21	19	0	0	132	Reported amount for June partially estimated.
16N/7E-23N1	Dr. Malcolm R. Hill	Irrigation and stockwatering	--	Estimated	1957	0	0	0	0	8	0	0	0	0	0	0	0	8	
16N/7E-29E1	J. C. Peacock	Irrigation	400 feet below intake	Staff gage and depth-flow relationship	1957	-	-	-	26	397	266	124	170	82	18	12	12	1,107*	Reported total is for 4/29/57 - 12/31/57 only.
16N/9E-17J1	Nevada City Water Department	Municipal	--	Estimated	1958	-	-	-	-	-	-	-	-	-	-	-	-	3,272	
				Donner Pass Subunit															
17N/11E-4P1	Tahoe Sugar Pine Co.	Municipal and industrial	Near intake	Staff gage	1957	-	-	-	-	-	-	301*	298	271	254	204*	198*	1,526*	Reported total is for 7/28/57 - 12/31/57 only. Amounts for July, November, and December partially estimated.
				Dry Creek Subunit															
15N/7E-25H1	Clarence R. Black	Irrigation, recreation, and stockwatering	At pump	Pump test and power records	1957	0	0	0	0	5	12	14	16	12	3	0	0	62	
				Dutch Flat Subunit															
				(No diversions measured)															

* See remarks
** Estimated
\- Monthly value unknown

TABLE 7 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet													Remarks
					Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
M D B & M					French Corral Subunit														
16N/8E-4E1	Joy Milliard	Irrigation and domestic	Near intake	Current meter and straight line prorate	1958	-	-	-	-	-	11*	10	11	17	16	12	10	87*	Reported total is for June - December only. Amount for June partially estimated.
17N/7E-33R1	C. R. and G. W. Maish	Irrigation 5/16/57 - 9/15/57 and stockwatering	Near intake	Estimated	1957	-	-	-	-	-	-	-	-	-	-	-	-	94*	Reported total is for 5/16/57 - 9/15/57 only.
17N/8E-1N1	Vincent Bellet	Irrigation and stockwatering	0.1 mile below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	12**	16**	17	13	6	5*	5**	74	Reported amount for November partially estimated.
17N/8E-9Q1	Burt L. Burda	Irrigation 5/15/57 - 7/15/57, recreation, and stockwatering	At reservoir	Estimated from change in storage	1957	0	0	0	0	-	-	-	0	0	0	0	0	45	
17N/8E-15D1	Minona Mining Co.	Irrigation, stockwatering, and domestic	Near intake	Staff gage and depth-flow relationship	1957	-	-	-	-	-	-	42*	51	89	50	0	0	232*	Reported total is for July - December 1957, only. Amount for July partially estimated.
					1958	0	0	0	0	207	172	82	32	21	55	43	16	628	
17N/8E-20G1	Frank S. Meader	Irrigation	At intake	Staff gage and depth-flow relationship	1958	0	0	0	0	5**	29**	30**	19*	12*	0	0	0	95	Reported amounts for August and September partially estimated.
17N/8E-25Q1	Piedmont Campfire Girls Group	Recreation 4/8/58 - 10/30/58 and storage	At intake	Estimated from change in storage	1958	0	0	0	-	-	-	-	-	-	-	0	0	159*	Total includes 95 af diverted to fill lake in April and released back to Rock Creek in October.
17N/9E-27K1	D. M. Loney	Irrigation 4/15/58 - 11/1/58 and stockwatering	Near intake	Current meter and straight line prorate	1958	0	0	0	16**	31**	28**	17*	11	8	5*	2**	0	118	Reported amounts for July and October partially estimated.
17N/9E-28N1	William L. Davies	Irrigation, stockwatering and domestic	Near intake	Current meter and straight line prorate	1958	-	-	-	-	14**	20**	21	14	7	4	5	4	89*	Reported total is for 5/15/58 - 12/31/58 only.
17N/9E-34K1	Harry M. Davis	Irrigation and domestic	Near intake	Estimated	1958	-	-	-	-	-	-	-	-	-	-	-	-	24*	Reported total is for May - December only.
17N/9E-35E1	Arborgast Brothers	Irrigation and stockwatering	Near intake	Current meter and straight line prorate	1958	0	0	0	0	25**	44**	24*	7**	0	0	0	0	100	Reported amount for July partially estimated.
					French Dry Creek Subunit														
16N/5E-12C1	Neal W. Duckels	Irrigation 5/15/57 - 9/25/57	Near release from reservoir	Staff gage and depth-flow relationship	1957	-	-	-	-	12**	21**	13	29	15	-	-	-	90*	Reported total is for 5/15/57 - 9/25/57 only.
16N/5E-12G1	Neal W. Duckels	Irrigation	At release from reservoir	Estimated	1957	0	0	0	0	-	-	-	-	-	-	0	0	79	
16N/6E-7L1	Henry P. Smith	Irrigation and stockwatering	Near intake	Staff gage and depth-flow relationship	1957	-	-	-	515*	658	548	404	247	222	240	159	510	3,503*	Reported total is for April - December only. Amount for April partially estimated.

* See remarks
** Estimated
- Monthly value unknown

TABLE 7 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet													Remarks
					Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
M D B & M				French Dry Creek Subunit (Continued)															
17N/5E-27R1	Burris, Burris, Burris and Noxworth	Irrigation and stockwatering	0.3 mile below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	12**	22*	18	23	21*	0	0	0	96	Reported amounts for June and September partially estimated.
17N/5E-34K1	James M. Stevens	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	7	38	46	44	32	30	5	0	0	202	
					1958	0	0	0	4	27	46	49	48	50	36	0	0	260	
18N/6E-34Q2	Clint Givens	Irrigation, power, and stockwatering	150 feet above reservoir	Staff gage and depth-flow relationship	1957	5**	4**	5**	5**	7**	6**	7*	6	8	6*	5**	5**	69	Reported amounts for July and October partially estimated.
19N/6E-25D1	Leslie W. Sills	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	1	1	5	6	6	5	0	0	0	24	
					1958	0	0	0	1	4	4	6	6	2	1	0	0	24	
19N/7E-17P1	Harry Mulock	Municipal	At storage tank	Estimated	1957	-	-	-	-	-	-	-	-	-	-	-	-	48*	Reported total includes undetermined amount from a well.
				Goodyears Bar Subunit															
19N/9E-6A1	Cal-Ida Lumber Co.	Industrial and fire protection	Near discharge	Current meter and operation record	1957	81	73	81	78	81	78	71	71	74	81	78	81	928	
19N/9E-8L1	W. R. Ellsworth	Domestic, mining, and recreation	Near intake	Estimated	1957	-	-	-	-	-	-	-	-	-	-	-	-	462	
19N/10E-8C1	Andrew Bachels	Municipal	Near intake	Current meter and straight line prorate	1957	-	-	-	-	-	-	116*	126	107	85	70*	-	504*	Reported total is for July - November only. Amounts for July and November partially estimated.
19N/10E-8F1	M. P. Fiecher	Domestic	Near intake	Current meter and operation records	1957	-	-	-	-	25**	24**	25*	31	34	35	23*	-	197*	Reported total is for May - November only and includes an undetermined amount of spill. Amounts for July and November partially estimated.
19N/10E-18J1	Best Mines Company, Inc.	Mining and domestic	Near intake	Estimated	1958	-	-	-	-	-	-	-	-	-	-	-	-	210	
20N/10E-14D1 20N/10E-26K1	Downieville Public Utility District	Municipal	0.5 mile upstream from town	Current meter and operation records	1957	11	10	12	11	28	27	28	28	27	12	11	12	217*	Reported amounts include all water diverted from the two diversion points.
20N/10E-32L1	Joseph P. Bachels	Irrigation, domestic, and power	Near intake	Current meter and straight line prorate	1957	-	-	-	-	-	-	-	79*	77**	76*	55*	-	287*	Reported total is for August - November only. Amounts for August, October, and November partially estimated.

* See remarks
** Estimated
\- Monthly value unknown

TABLE 7 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet													Remarks
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
M D B & M						Greenhorn Creek Subunit													
16N/9E-29M1	Elmo C. Cox	Irrigation	Near intake	Water-stage recorder and depth-flow relationship	1958	0	0	0	0	0	8**	8*	6	6	10*	4**	0	42	Reported amounts for July and October partially estimated.
16N/9E-32D1	Andrew Ueland	Irrigation and stockwatering	300 feet below intake	Estimated	1958	-	-	-	-	-	-	-	-	-	-	-	-	215	
16N/9E-32M1	Miss Lucy Welles	Irrigation 6/12/58 - 11/13/58 and stockwatering	Near intake	Water-stage recorder and depth-flow relationship	1957	0	0	0	0	0	36	62	81	81	45	39	29	373	
						La Porte Subunit													
						(No diversions measured)													
						Orchard and Pleasant Grove Creeks Subunit													
						(No diversions measured)													
						Pike Subunit													
17N/8E-6R1	M. Kehn	Irrigation 5/1/58 - 10/18/58 and stockwatering	At point of use	Sprinkler test and operation record	1958	0	0	0	0	1	1	2	1	1	1	0	0	7	
18N/8E-15A1	Cunningham Ditch	Irrigation 6/1/57 - 10/20/57 and stockwatering	0.2 mile below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	140**	150**	148*	128	21	0	0	587	Reported amount for August partially estimated
18N/8E-15R1	George Butz	Irrigation and domestic	Near intake	Estimated	1957	-	-	-	-	-	-	-	-	-	-	-	-	40	
18N/8E-20Q1	Francis J. and Ruth Bartsch	Irrigation, stock-watering, and recreation	0.5 mile below intake	Staff gage and depth-flow relationship	1957	20**	20**	20**	20**	20**	20**	23*	28	20	26	27*	30**	274	Reported amounts for July and November partially estimated.
18N/9E-8M1	Wesley S. Parker	Irrigation and power	At intake	Estimated	1957	-	-	-	-	-	-	-	-	-	-	-	-	70*	Reported total is for June - September only.
						Rocklin Subunit													
11N/6E-25G1	George Mavrias	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	0	1	2	4	4	2	0	0	0	13	
					1958	0	0	0	0	1	2	1	3	3	2	1	0	13	

* See remarks
** Estimated
\- Monthly value unknown

TABLE 7 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet													Remarks
					Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
M D B & M					Rocklin Subunit (Continued)														
11N/7E-1C1	Gorden Glenn M. A. Herris	Irrigation 5/1/57 - 10/20/57 and stockwatering	500 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	46**	51	73	60	72	94*	70**	-	466*	Reported total is for 5/1/57 - 11/15/57 only. Amount for October partially estimated.
11N/7E-2A1	M. A. Herris	Irrigation	At pump	Estimated	1957	0	0	-	-	-	-	-	-	-	0	0	0	27	
11N/7E-10H1	Frank W. and Ora I. Crossley	Irrigation 6/18/57 - 10/5/57 and stockwatering	At intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	2	4	6	12	1	0	0	25	
11N/7E-10P1	R. E. and Ruby Horton	Irrigation	At pump	Estimated	1957	0	0	0	0	0	-	-	-	0	0	0	0	3	
11N/7E-11C1	John E. Boyington	Irrigation 5/16/57 - 9/16/57 and stockwatering	At pump	Pump test and power records	1957	0	0	0	0	3	9	15	16	8	0	0	0	51	
11N/7E-11C2	John E. Boyington	Irrigation 4/16/57 - 9/16/57 and stockwatering	At pump	Pump test and power records	1957	0	0	0	0	14	17	20	20	9	0	0	0	80	
11N/7E-17C1	Antonio and Frances Montero	Irrigation	At pump	Pump test and power records	1958	-	-	-	-	3	5	9	9	6	2	1	-	35*	Reported total is for May - November only.
11N/7E-17M1	Ralph B. and Julia H. Aitken	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	27	34	51	64	64	49	0	0	0	289	
11N/7E-17P1	Susie I. and W. F. Rose	Irrigation and stockwatering	At pump	Pump test and power records	1957 1958	0 0	0 0	1 0	0 1	2 2	4 4	3 4	3 3	2 3	0 1	0 0	0 0	15 18	
11N/7E-19R1	Guy Schoonderwoerd	Irrigation	At pump	Pump test and power records	1957 1958	0 0	0 0	2 0	3 0	2 0	4 4	5 5	4 5	2 4	0 0	0 0	0 0	22 18	
11N/7E-20G1	Joe Boiss	Irrigation and stockwatering	At sprinklers	Pump test and power records	1957	0	0	1	4	9	12	12	11	6	3	0	0	57	
11N/7E-20J1	I. C. Lewis L. E. Wyatt	Irrigation April - September and stockwatering	At pumps	Estimated	1957	-	-	-	-	-	-	-	-	-	-	-	-	55*	Reported total is for April - September only.
11N/7E-20P1	Ruben J. Ruhkala	Irrigation	At pump	Pump test and power records	1957	0	0	0	0	1	2	4	4	3	-	-	-	15*	Reported total is for 1/1/57 - 11/8/57 only.
11N/7E-20P2	George L. and Marion E. Robson	Irrigation	At pump	Pump test and power records	1957 1958	0 0	0 0	0 0	0 0	0 1	2 2	3 2	4 3	2** 2	0 0	0 0	0 0	11 10	
11N/7E-20P3	Gordon T. and Beth L. Gulbranson	Irrigation	At pump	Pump test and power records	1958	0	0	1	3	8	10	13	11	8	5	2	0	61	
11N/7E-27L1	Edward J., Boy, and K. Brown	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	1	3	7	9	10	7	1	0	0	38	

* See remarks
** Estimated
\- Monthly value unknown

TABLE 7 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet												Remarks
						Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
M D B & M					Rocklin Subunit (Continued)														
11N/8E-7B1	Mrs. Alice Day	Irrigation	At pump	Pump test and power records	1957	0	0	0	0	0	3	6	4	2	0	0	0	15	
11N/8E-18B1	Dwight Brown	Irrigation 4/1/57 - 10/31/57 and recreation	At pump	Pump test and power records	1957	0	-	-	2	3	7	11	11	7	2	-	0	43*	Reported total is for January, April - October and December only.
12N/7E-33E1	Arthur L. Traylor	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	4	5	6	8	8	7	3	0	0	41	
12N/7E-34M1	Brian B. and Emma Mae Hughes	Irrigation	At pump	Pump test and power records	1957	0	0	0	1	3	7	10	8	7	2	0	0	38	
12N/7E-36N1	John A. Patton	Irrigation May - October	At pump	Estimated	1957	0	0	0	0	-	-	-	-	-	-	0	0	9	
					Sierra City Subunit														
					(No diversions measured)														
					Washington Subunit														
18N/10E-29P1	Mason J. Meredith	Irrigation 5/1/57 - 9/30/57, stockwatering, and power	At area of use	Estimated	1957	0	0	0	0	-	-	-	-	-	0	0	0	317	
18N/10E-31M1	North Bloomfield Community System	Domestic	Near intake	Estimated	1958	-	-	-	-	-	-	-	-	-	-	-	-	103*	Reported total is for water delivered to reservoir.
					Wolf Creek Subunit														
14N/8E-5J2	C. R. and M. L. Milham	Irrigation 5/8/58 - 11/12/58 and stockwatering	At intake	Staff gage and depth-flow relationship	1958	0	0	0	0	49	61	63	62	58	48	15	0	356	
14N/8E-21R1	P. T. Clay	Irrigation and stockwatering	At pump	Pump test and power records	1957	0	0	0	1	2	3	5	4	3	1	0	0	19	
					1958	0	0	0	1	2	3	4	5	4	3	1	0	23	
14N/8E-22P1	Daniel O. and M. W. Newton	Irrigation, recreation, power and stockwatering	At reservoir	Estimated from change in reservoir capacity	1957	-	-	-	-	-	-	-	-	-	-	-	-	20	
15N/8E-12P1	Mrs. Katie M. Wheeler	Irrigation	0.1 mile below intake	Current meter and straight line prorate	1957	0	0	0	0	0	6**	7**	7*	6	4	0	0	30	Reported amount for August partially estimated.

* See remarks
** Estimated
\- Monthly value unknown

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Location number	Diversion name or owner	Use	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet													Remarks
					Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
M D B & M					Wolf Creek Subunit (Continued)														
15N/8E-13F1	O. W. Brewer	Irrigation 5/6/57 - 10/6/57 and stockwatering	Near intake	Current meter and operation record	1957	0	0	0	0	6	12	13	13	12	0	0	0	56	
15N/8E-14J1	J. N. Ball	Irrigation and stockwatering	0.3 mile below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	10**	50**	50**	50**	38	0	0	0	198	
15N/8E-15M1	N. O. Pingrea	Irrigation and stockwatering	200 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	20**	40**	46	26	0	0	0	132	
15N/8E-22E1	D. M. Mefford	Irrigation and stockwatering	0.1 mile below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	50**	49	49	62	28	0	0	238	
15N/8E-22L1	Leo Flury	Irrigation	500 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	-	10**	10*	10	7	0	0	0	37	Reported amount for July partially estimated.
15N/8E-22M1	J. W. Stevenson	Irrigation and stockwatering	100 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	170**	290**	300**	295	337	85	0	0	1,477	
15N/8E-22P1	Leo Flury	Irrigation	150 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	20**	30**	70**	79*	76	85	0	0	0	360	Reported amount for July partially estimated.
15N/8E-23N1	Victor Garofalo	Irrigation	--	Staff gage and depth-flow relationship	1957	0	0	0	0	10**	40**	30**	16	10	22	18*	0	146	Reported amount for November partially estimated.
15N/8E-27C1	D. N. Mefford	Irrigation	400 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	10**	40**	41**	46	53	1	0	0	191	Reported amount for July partially estimated.
15N/8E-28A1	Andrew M. Harvey	Irrigation and stockwatering	200 feet below intake	Staff gage and depth-flow relationship	1957	0	0	0	0	0	260**	260**	197*	319	50	0	0	1,086	Reported amount for August partially estimated.
16N/8E-24K1	Malcolm Hammill	Irrigation 6/1/57 - 10/1/57 and stockwatering	--	Estimated	1957	0	0	0	0	0	-	-	-	-	0	0	0	150	
16N/8E-25A1	Oro Lumber Company	Industrial	At reservoir	Estimated from change in reservoir capacity	1957	-	-	-	-	-	-	-	-	-	-	-	-	50	

* See remarks
** Estimated
\- Monthly value unknown

TABLE 8

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
NEVADA IRRIGATION DISTRICT SYSTEM
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
1957-1958

Location number	Diversion name or owner	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet												Total	Remarks
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
M D B & M								Mountain Division										
19N/12E-12N1 19N/12E-14F1 19N/12E-14H1	Milton-Bowman Tunnel	U.S.G.S. gaging station, "Milton-Bowman Tunnel at outlet", 100 feet below tunnel outlet	Water stage recorder and depth-flow relationship	1957	673	4,080	8,390	14,380	25,090	11,420	1,230	358	205	711	1,140	1,850	69,527	Reported amounts include diversions from the three diversion points indicated.
				1958	1,640	6,570	5,040	4,060	5,980	8,160	4,720	652	331	318	434	391	38,296	
18N/12E-8C1	Bowman Lake	U.S.G.S. gaging station, "Bowman-Lake near Graniteville"	Water stage recorder and stage-capacity relationship	1957	1,844	11,302	9,748	8,570	20,610	6,279	4,365	7,038	5,867	1,192	2,626	6,015	85,456	Reported amounts represent diversions from Canyon Creek obtained from change in storage in Bowman Lake, inflow from Milton-Bowman Tunnel, and outflow to Bowman-Spaulding Conduit and Canyon Creek. Thus releases from storage in Jackson Lake, Sawmill Lake, Island Lake, and French Lake are included herein.
				1958	2,951	12,163	9,313	8,181	35,593	24,421	5,500	1,682	10,113	1,392	263	-222	111,350	
18N/12E-8C2	Bowman-Spaulding Conduit	U.S.G.S. gaging station, "Bowman-Spaulding Canal at intake", 150 feet below intake	Water stage recorder and depth-flow relationship	1957	13,070	6,820	8,460	9,340	4,630	529	13,870	13,590	13,160	13,760	13,090	12,940	123,259	
				1958	12,780	8,610	9,570	10,200	824	891	12,420	12,410	12,030	12,990	12,740	13,130	118,595	
								Nevada Division										
17N/8E-27H1	Excelsior Ditch	2.7 miles below intake	Water stage recorder and depth-flow relationship	1957	-	-	-	1,134*	1,379	1,669	1,838	1,980	1,923	1,504	1,325	937	13,689*	Reported total is for April - December 1957, only. Amount for April partially estimated. Reported total is for January - March 1958, only.
				1958	466	31	12	-	-	-	-	-	-	-	-	-	509*	
17N/10E-34E1	Cascade Canal	5.3 miles below intake	Water stage recorder and depth-flow relationship	1957	-	-	-	1,300	1,590	2,730	3,500	3,590	3,360	2,150	1,340	1,160	20,720*	Reported total is for April - December 1957, only. Reported total is for January - March 1958, only.
				1958	1,330	1,150	2,020	-	-	-	-	-	-	-	-	-	4,500*	
17N/10E-32M1 17N/10E-32E1	Snow Mountain Ditch	1.7 miles below intake	Water stage recorder and depth-flow relationship	1957	-	-	-	288	401	427	578	337	481	492	422	368	3,794*	Reported total is for April - December 1957, only. Reported total is for January - March 1958, only.
				1958	330	332	120	-	-	-	-	-	-	-	-	-	782*	
16N/9E-7H1	Rough and Ready Ditch	300 feet below intake	Water stage recorder and depth-flow relationship	1957	-	-	-	96	89	128	109	207	173*	239	247	224	1,512*	Reported total is for April - December 1957, only. Amount for September 1957 partially estimated. Reported total is for January - March 1958, only.
				1958	235	506	493	-	-	-	-	-	-	-	-	-	1,234*	

* See remarks
– Monthly value unknown

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
NEVADA IRRIGATION DISTRICT SYSTEM
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
1957-1958

Location number	Diversion name or owner	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet												Remarks
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
M D B & M					Nevada Division (Continued)												
16N/9E-10B1	D-S Canal	Near intake	Water stage recorder and depth-flow relationship	1957	-	-	-	1,962	2,043	3,845	5,992	5,982*	5,879	1,451	1,037	930	29,121*
				1958	533	293	116	-	-	-	-	-	-	-	-	-	942*
																	Reported total is for April - December 1957, only. Amount for August 1957 partially estimated. Reported total is for January - March 1958, only.
16N/8E-12K1	Newtown Ditch	Near intake	Water stage recorder and depth-flow relationship	1957	0	0	53	448	548	791	806*	861	741	418	0	35	4,701
																	Reported amount for July partially estimated.
16N/8E-18M1	Tunnel Ditch	0.4 mile below intake	Water stage recorder and depth-flow relationship	1957	-	-	-	342	309	984	967	830	780	477	283*	181	5,153*
				1958	184	27	22	260	1,100	999	926	999*	984*	766	248	178*	6,693
																	Reported total is for April - December 1957, only. Amounts for November 1957, August, September, and December 1958, partially estimated.
16N/7E-20E1	China Ditch	0.1 mile below intake	Water stage recorder and depth-flow relationship	1957	-	-	-	1,390	2,000	1,810	1,410	1,520*	1,530*	1,540	1,140*	986	13,326*
				1958	715	168	834	-	-	-	-	-	-	-	-	-	1,717*
																	Reported total is for April - December 1957, only. Amounts for August, September, and November 1957 partially estimated. Reported total is for period January - March 1958, only.
15N/8E-9K1	French Ravine Ditch	50 feet above discharge into Tarr Ditch	Staff gage and depth-flow relationship	1957	-	-	-	40*	46	30	10	11	20	31	27	0	215*
																	Reported total is for April - December only. Amount for April partially estimated.
15N/8E-10R1	Tarr Ditch	0.2 mile below intake	Water stage recorder and depth-flow relationship	1957	-	-	-	1,650	2,510	2,980	3,260	3,340	3,030*	1,390*	558	593	19,311*
				1958	749	351	263	-	-	-	-	-	-	-	-	-	1,363*
																	Reported total is for April - December 1957, only. Amounts for September and October 1957 partially estimated. Reported total is for January - March 1958, only.
14N/7E-28B1	Hannaman Ditch	0.1 mile below intake	Water stage recorder and depth-flow relationship	1957	0	0	0	9	349	185	182*	93*	149*	48	0	0	1,015
																	Reported amounts for July, August, and September partially estimated.
--	Rough and Ready Ditch	500 feet below Highway 20 near Rough and Ready	Water stage recorder and depth-flow relationshio	1958	-	-	-	85*	137	143	138	139	147	180	116	96	1,181*
																	Reported total is for 4/18/58 - 12/31/58 only. Amount for April partially estimated.
--	Smith Gordon Ditch	0.7 mile above road between Casey Corner and Indian Springs	Water stage recorder and depth-flow relationship	1958	-	-	-	167	460*	430	432	483	408	469	84	54	2,987*
																	Reported total is for 4/18/58 - 12/31/58 only. Amount for May partially estimated.

* See remarks
\- Monthly value unknown

TABLE 8 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
NEVADA IRRIGATION DISTRICT SYSTEM
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
1957-1958

Location number	Diversion name or owner	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet												Remarks
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
M D B & M								Nevada Division (Continued)										
--	Bald Hill Ditch	0.1 mile below intake	Water stage recorder and depth-flow relationship	1958	-	-	-	21	104	102	87	112	113	108	5	0	652*	Reported total is for 4/18/58 - 12/31/58 only.
--	Pet Hill Ditch	At Highway 20	Staff gage and depth-flow relationship	1958	0	0	0	0	17	2	10	10	16	21	1	0	77	
								Placer Division										
13N/8E-2E2	Magnolia No. 3	25 feet above control weir	Water stage recorder and depth-flow relationship	1957	-	-	-	144	158	196	193	219	209	90	12	4	1,225*	Reported total is for April - December 1957, only. Reported total is for January - March 1958, only.
				1958	12	11	10	-	-	-	-	-	-	-	-	-	33*	
13N/8E-3H1	Gold Hill Canal	0.1 mile below intake	Water stage recorder and depth-flow relationship	1957	-	-	-	4,890	6,210	5,600	3,970	3,840	3,440	2,450	1,270	1,440	33,110*	Reported total is for April - December 1957, only.
				1958	1,410	1,120	1,150	2,180	5,570	5,720	5,450	4,390	3,850	2,910	1,250	1,160	36,160	
--	Gold Hill Canal	200 feet below Magnolia No. 1	Water stage recorder and depth-flow relationship	1958	-	-	599	1,780	4,700	4,810	4,480	3,510	3,260	2,510	1,130	980	27,759*	Reported total is for 3/13/58 - 12/31/58 only.
13N/7E-13N1	Camp Far West Canal	Near intake	Water stage recorder and depth-flow relationship	1957	-	-	-	1,037*	1,499*	1,520	1,800	1,750	1,840	1,250	358	394	11,448*	Reported total is for April - December 1957, only. Amounts for April and May partially estimated. Reported total is for January - March 1958, only.
				1958	364	165	242	-	-	-	-	-	-	-	-	-	771*	
--	Camp Far West Canal Lateral	At end of 15-inch pipe from turnout on ditch 100 feet above road at 13N/6E-1F1	Staff gage and depth-flow relationship	1958	-	-	3	28	78	84	97	103	107	95	20	25	640*	Reported total is for 3/4/58 - 12/31/58 only.
--	Camp Far West Canal Lateral	At turnout on ditch 0.5 mile below road at 13N/6E-2A1	Staff gage and depth-flow relationship	1958	-	-	2	41	98	101	99	107	104	99	11	15	677*	Reported total is for 3/1/58 - 12/31/58 only.
--	Camp Far West Canal Lateral	At turnout on ditch 0.4 mile above road at Valley View School	Staff gage and depth-flow relationship	1958	-	-	12	38	98	78	88	97	105	82	17	18	633*	Reported total is for 3/1/58 - 12/31/58 only.

* See remarks
– Monthly value unknown

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
NEVADA IRRIGATION DISTRICT SYSTEM
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
1957-1958

Location number	Diversion name or owner	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet												Remarks
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
M D B & M					**Placer Division (Continued)**													
--	Camp Far West Canal Lateral	At turnout on ditch 0.3 mile above road at Valley View School	Staff gage and depth-flow relationship	1958	-	-	-	-	14	16	2	1	0	2	0	0	35*	Reported total is for 4/5/58 - 12/31/58 only.
--	Camp Far West Canal	400 feet below road at Valley View School	Water stage recorder and depth-flow relationship	1958	-	-	54	198	586	564	589	606	638	507	71	54	3,867*	Reported total is for 3/13/58 -- 12/31/58 only.
--	Camp Far West Canal Lateral	At turnout on ditch 0.2 mile below road at Valley View School	Staff gage and depth-flow relationship	1958	-	-	0	117	356	348	380	383	356	300	59	10	2,309*	Reported total is for 3/12/58 - 12/31/58 only.
13N/6E-22A1	Coon Creek Pump	At pump	Pump test and power records	1957	0	0	0	0	86	161	198	222	222	0	0	0	889	
13N/6E-36G1	Doty's South Ditch	100 feet below intake	Water stage recorder and depth-flow relationship	1957	0	0	0	138*	500	585	736	766	779	146	0	0	3,650	Amount for April partially estimated.
12N/7E-14A1	Auburn Ravine Canal	Near intake	Water stage recorder and depth-flow relationship	1957	-	-	-	911	2,031	3,020	3,600	3,440	3,000	997	449	487	17,935*	Reported total is for April - December 1957, only. Reported total is for January - March 1958, only.
				1958	377	324	458	-	-	-	-	-	-	-	-	-	1,159*	
			Deliveries from Pacific Gas and Electric Company to Nevada Irrigation District															
--	Deer Creek Powerhouse Discharge	Above forebay	Water stage recorder and depth-flow relationship	1957	1,540	136	846	6,220	6,380	4,860	3,940	4,220	4,090	3,810	3,980	2,060	42,082	
				1958	2,240	4,860	6,090	4,500	3,050	5,860	5,290	4,050	4,030	4,800	2,650	2,220	49,640	
--	Bear River at Lake Combie	0.5 mile below Colfax	Water stage recorder and depth-flow relationship	1957	0	0	0	0	0	0	1,040	3,910	2,680	34	0	0	7,664	Water released near head of Bear River Canal.
				1958	0	0	0	0	0	0	0	1,130	2,970	1,330	0	0	5,430	
--	Rock Creek North Ditch	Near intake	Sparling meter*	1957	75	109	69	44	129	692	1,679	1,698	1,652	805	116	135	7,203	Water stage recorder and depth-flow relationship used when flow exceeded approximately 2 cfs.
				1958	136	63	87	73	136	130	634	1,740	1,680	1,490	116	120	6,405	
--	Ophir Pipe	At outlet of pipe	Water stage recorder and depth-flow relationship	1957	188	169	86	193	490	988	2,330	2,320	2,250	760	182	188	10,144	
				1958	194	170	141	178	865	1,520	2,030	2,340	2,260	2,240	274	209	12,421	

* See remarks
-- Monthly value unknown

TABLE 8 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
NEVADA IRRIGATION DISTRICT SYSTEM
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
1957-1958

Location number	Diversion name or owner	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet												Remarks
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
				Deliveries from Pacific Gas and Electric Company to Nevada Irrigation District (Continued)														
--	Fiddler Green Delivery	At intake	Orifice	1957	7	6	7	0	36	26	26	26	26	16	6	6	184	
				1958	6	6	6	16	26	26	26	27	26	16	6	6	193	
--	Edgewood Pump	At intake	Sparling meter	1957	38	32	32	43	60	107	127	122	114	50	27	18	770	
				1958	17	15	12	31	86	98	116	129	124	109	58	34	829	
--	South Canal Delivery to Auburn Ravine	At discharge of energy dissipator	Water stage recorder and depth-flow relationship	1957	0	0	0	0	4,140	4,600	5,060	,050	4,580	768	0	0	24,198	
				1958	0	0	0	163	4,440	4,820	5,040	5,030	3,210	2,020	298	0	25,021	
--	South Canal Delivery at Tunnel 11	0.6 mile below intake	Water stage recorder and depth-flow relationship	1957	0	0	0	239	65	1,621	2,914	2,427	394	0	0	0	7,660	In addition to reported amounts, a total of 1,522 acre-feet were released as regulatory spill in 1958.
				1958	0	0	0	0	502	88	1,394	1,472	138	0	0	0	3,594	

* See remarks
– Monthly value unknown

TABLE 9

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
PACIFIC GAS AND ELECTRIC COMPANY SYSTEM
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
1958

Location number	Diversion name or owner	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet												Remarks
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
				Power Systems													
NORTH YUBA RIVER SYSTEM																	
18N/7E-24D1	Bullards Bar Powerhouse	Powerhouse	Reported kilowatt output	38,500	33,300	37,300	36,100	37,000	36,100	37,900	32,200	17,900	8,000	21,300	14,600	350,320	
18N/7E-25F1	Colgate Tunnel	Powerhouse	Reported kilowatt output	31,400	28,300	31,100	30,300	28,600	27,200	27,500	26,800	14,700	6,520	18,800	13,300	284,520	
16N/6E-14Q1	Narrows Powerhouse	Powerhouse	Reported kilowatt output	47,000	41,100	46,500	44,600	45,900	44,200	47,300	45,900	38,800	24,000	16,700	24,000	466,000	
SOUTH YUBA AND BEAR RIVERS SYSTEM																	
17N/12E-20J1	South Yuba Canal	1.0 mile below intake	Water stage recorder and depth-flow relationship	2,450	5,490	6,920	7,070	4,530	7,090	6,670	6,270	6,820	6,480	3,040	2,860	65,690	
17N/12E-20H1	Drum Canal	7.4 miles below intake	Water stage recorder and depth-flow relationship	26,500	24,300	26,900	23,500	27,400	20,500	27,900	27,900	27,000	27,900	27,000	18,600	305,400*	Reported total includes 7,271 acre-feet from 17N/12E-33B1, (Lake Valley Canal, American River Hydrographic Unit.)
17N/12E-33B1 (American River Hydrographic Unit)	Lake Valley Canal	--		(See Table of Imports and Exports)													
16N/11E-17E1	Dutch Flat Tunnel	Powerhouse	Reported kilowatt output	20,700	27,600	30,700	30,300	31,400	29,100	27,900	27,500	27,500	27,500	25,600	16,800	322,600	
15N/9E-22Q1	Bear River Canal	Near intake	Water stage recorder and depth-flow relationship	26,100	20,500	18,600	19,600	27,100*	26,300	27,300	27,600	26,800	27,700	26,000*	19,100	292,700	Reported amounts for May and November partially estimated.

* See remarks
** Estimated
— Monthly value unknown

TABLE 9 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
PACIFIC GAS AND ELECTRIC COMPANY SYSTEM
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
1958

Location number	Diversion name or owner	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet													Remarks
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
SOUTH YUBA AND BEAR RIVERS SYSTEM (Continued)								Power Systems (Continued)									
--	Bear River Canal	Above Halsey Forebay	Water stage recorder and depth-flow relationship	26,300	21,400	19,200	19,800	27,100	25,700	26,600*	26,400*	26,000	26,300	25,900	19,500	290,200	Reported amounts for July and August partially estimated.
--	Dutch Ravine Canal Spill	At intake	Staff gage and depth-flow relationship	146**	45	0	0	0	0	0	0	0	14**	19**	0	224	Point of spill located 0.2 mile below intake from South Canal.
(*)	South Canal Spill to American River	--	--	(See Table of Imports and Exports)													Export to American River
								Placer Water System									
17N/11E-36D1	Boardman Canal	Near intake	Water stage recorder and depth-flow relationship	1,650	1,750	2,080	0	345	1,700	2,150	1,680	1,620	1,260	658	1,110	16,003	
16N/11E-9J1	Pitman Ravine Flume	At intake	Staff gage and depth-flow relationship	-	-	-	-	293	54	25	45	14	6	18	15	470*	Reported total is for 5/1/58 - 12/31/58 only.
16N/11E-31C1 (American River Hydrographic Unit)	Towle Canal	--	--	(See Table of Imports and Exports)													
16N/10E-35J1 (American River Hydrographic Unit)	Pulp Mill Canal	--	--	(See Table of Imports and Exports)													
--	Boardman Canal	Near Applegate	Water stage recorder and depth-flow relationship	824	548	881	1,130	992	962	938	853	754	542	642	782	9,848	
--	Caperton Canal	At intake	Water stage recorder and depth-flow relationship	309*	155	250	298	895	1,050	1,210	1,230	1,090	779	451*	392	8,109	Reported amounts for January and November partially estimated.
--	Caperton Canal	0.5 mile above Caperton Reservoir	Water stage recorder and depth-flow relationship	-	-	92	85	23	252	375	403	338	358	241	186	2,353*	Reported total is for 3/13/58 - 12/31/58 only.
--	Boardman Canal	Above McCrary Reservoir	Water stage recorder and depth-flow relationship	615	578	606	446	1,180	1,300	1,470	1,590	1,580	1,110	653**	694	11,822	

* See remarks
** Estimated
— Monthly value unknown

TABLE 9 (Continued)

MONTHLY RECORDS OF SURFACE WATER DIVERSIONS
PACIFIC GAS AND ELECTRIC COMPANY SYSTEM
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
1958

Location number	Diversion name or owner	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet													Remarks
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
				Placer Water System (Continued)													
--	Boardman Canal Spill to Roseville Regulator	At point of spill	Water stage recorder and depth-flow relationship	74	141*	148*	122	252	271	282	267	228	155	176	164	2,280	Tail spill from Boardman Canal. Reported amounts for February and March partially estimated.
				Power System Transfers to Placer Water System													
(*)	Drum Forebay Release to Canyon Creek	--	--	See Table of Imports and Exports													Export to American River.
--	Ragsdale Tunnel Canal	Above Bowman Feeder Canal	Water stage recorder and depth-flow relationship	56	0	116	28	216	468	593	630	564**	826	368	210	4,075	Transfer from Bear River Canal via Ragsdale Tunnel Canal
--	Dutch Ravine Canal	0.3 mile below South Canal	Water stage recorder and depth-flow relationship	780	593	698	946	2,520	3,130	3,550	3,510	3,070	2,080	1,240	1,080	23,197	Transfer from South Canal via Dutch Ravine Canal
--	Boardman Canal	0.4 mile below South Canal	Water stage recorder and depth-flow relationship	1,220	1,200	1,280	1,160	2,970	3,560	3,980	3,780	3,150	2,350	1,960	1,520	28,130	Transfer from South Canal to Boardman Canal
		0.1 mile above South Canal		-	-	-	-	324	60**	30**	124	223	274	284	300**	1,619	
		Net recharge from South Canal		-	-	-	-	2,646	3,500**	3,950**	3,656	2,927	2,076	1,676	1,220*	21,651	

* See remarks
** Estimated
— Monthly value unknown

Index to Surface Water Diversions

For convenience of the reader, an alphabetical index of diversion owners and diversion names, along with the subunit location of each diversion and reference to map and page numbers on which data concerning each appears, is shown on Table 15 at the end of this chapter.

Imports and Exports

Imports

Imports of surface water to the unit consist of five diversions from adjacent watersheds for use in the Yuba-Bear Rivers Hydrographic Unit. They are Lake Valley Canal, Pulp Mill Canal, and Towle Canal, all owned by Pacific Gas and Electric Company and diverting from the American River watershed; and Bean Ditch and Oroville-Wyandotte Canal, diverting from the Feather River watershed.

Lake Valley Canal diverts from the North Fork of North Fork American River to supplement the Drum Canal, while the Pulp Mill Canal and the Towle Canal divert from Canyon Creek, which is a tributary to the North Fork American River, to supplement the Boardman Canal.

Bean Ditch diverts from Sly Creek for irrigation of 80 acres and for supply to the community of Strawberry Valley.

Oroville-Wyandotte Irrigation District's Oroville-Wyandotte Canal diverts from Lost Creek and passes through the Yuba-Bear Rivers Hydrographic Unit, but its primary use is in the Feather River watershed. The only service from the ditch in the unit is to the Sacramento Box and Lumber Company mill at Woodleaf.

Exports

Five diversions in the Yuba-Bear Rivers Hydrographic Unit divert water from the unit for uses in the American River and Feather River watersheds and the Sacramento Valley floor.

Pacific Gas and Electric Company's Boardman and Bear River Canals export portions of their supplies to the American River watershed and the Sacramento Valley floor for irrigation, domestic, and municipal uses, and the excess is released to Folsom Reservoir on the American River. The areas served by these diversions outside the unit extend along the southern hydrographic unit boundary from the Dutch Flat area to Roseville. The primary area irrigated is in the American River watershed to the south of Auburn. That portion of the City of Roseville outside of the Yuba-Bear Rivers Hydrographic Unit is the principal municipal service area outside the unit. The amount exported by these diversions in 1958 was about 174,300 acre-feet, of which a large portion was spilled to Folsom Reservoir.

Camp Far West Reservoir stores water on the Bear River for supply to Camp Far West Irrigation District on the Sacramento Valley floor.

Diversion 17N/6E-4H1, owned by Frank Carmichael, diverts water from Dry Creek for use in the Feather River watershed, on the Sacramento Valley floor, and in the Yuba-Bear Rivers Hydrographic Unit. During the irrigation season April through October, water is exported to the Feather River and Sacramento Valley areas for irrigation purposes. During

the period November through March, water is released from the diversion to Tennessee Creek in the Feather River area from which it is delivered to the Browns Valley Irrigation District by rediversion to the Browns Valley Ditch. Part of this water is used in the hydrographic unit and the remainder is exported to the Sacramento Valley floor. The water delivered to the district is in exchange for water supplied by the district to Frank Carmichael for use on the Sacramento Valley floor during the irrigation season.

Browns Valley Ditch serves areas in the Feather River watershed and the Sacramento Valley floor within the Browns Valley Irrigation District principally for irrigation, domestic uses, and stockwatering. Of the 20,036 acre-feet of water diverted during the period of measurement in 1957, 4,882 acre-feet were exported.

In years when surplus water is available to Nevada Irrigation District in Placer County, portions of such water are released down Auburn Ravine for sale to users on the Sacramento Valley floor. A total of 11,220 acre-feet of such water was sold in 1958.

For records of measured quantities of water exported to other hydrographic units, or imported to the unit, see Table 10. Locations of points of import and export are designated on Plate 2.

TABLE 10

MONTHLY RECORDS OF IMPORTS AND EXPORTS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Diversion name or owner	Location number	Source	Hydrographic unit imported from or exported to	Location number point of import or export	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet												Remarks
								Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
						Imports														
Lake Valley Canal Pacific Gas and Electric Company	17N/12E-33B1	North Fork of North Fork American River	American River	17N/12E-30R	0.8 mile below intake	Water stage recorder and depth-flow relationship	1958	0	0	0	0	0	0	814	1710	1600	1700	1350	97	7,271	
Bean Ditch Soper-Wheeler Company	21N/8E-34P1	Sly Creek	Feather River	20N/8E-29Q	0.1 mile above area of use	Estimated	1957	22	20	22	21	22	45	46	46	45	9	0	0	298	
Boardman Canal System Pacific Gas and Electric Company																				
Diversions from Canyon Creek:																				
Towle Canal	16N/11E-21E1	Canyon Creek	American River	16N/11E-31C	0.4 mile below intake	Water stage recorder and depth-flow relationship	1958	1910	2180	2460	1680	1390	1860	1950	1640	1590	1320	1130	1290	20,400	
Pulp Mill Canal	16N/10E-36Q1	Canyon Creek	American River	16N/10E-35J	0.8 mile below intake	Water stage recorder and depth-flow relationship	1958	213	261	277	7	0	0	0	0	0	0	0	0	758	Canal not in use May - December due to slide.
Less Discharges to Canyon Creek:																				
Drum Forebay Release (Drum Canal)	17N/12E-20J1	South Yuba River	American River	16N/11E-16L	Near forebay	Staff gage and depth-flow relationship	1958	0	0	80	380	250	58	0	0	0	59	990	125	1,942	
Boardman Canal	17N/11E-36D1	Bear River	American River	16N/11E-16M	0.3 mile above Canyon Creek	Water stage recorder and depth-flow relationship	1958	1940	2060	2180	685	804	1720	1850	1550	1500	1200	32*	1070*	16,591	Reported amounts for November and December partially estimated.
					Net Import to	Boardman Canal System		183	381	477	622	336	82	100	90	90	61	108	95	2,625	
						Exports														
Boardman Canal Pacific Gas and Electric Company	17N/11E-36D1	Bear River	Sacramento Valley Floor	(*)	(*)	(*)	1958	148	141	143	158	192	372	397	483	460	349	260	171	3,274	Delivery to the City of Roseville at the Roseville regulator. Records obtained from the City of Roseville.
Boardman Canal Pacific Gas and Electric Company	17N/11E-36D1	Bear River	Sacramento Valley Floor	(*)	(*)	Estimated	1958	-	-	-	-	-	-	-	-	-	-	-	-	326	Delivery to Southern Pacific Company at Roseville regulator. Records obtained from Southern Pacific Company.
Colfax Pipeline* Pacific Gas and Electric Company	(*)	Bear River	American River	15N/9E-27R	(*)	(*)	1958	14	14	13	15	21	21	38	43	25	20	18	21	263	Lateral of 17N/11E-36D1 (Boardman Canal). Delivery to municipal system for City of Colfax. Records obtained from City of Colfax.

* See remarks
- Monthly value unknown

TABLE 10 (Continued)

MONTHLY RECORDS OF IMPORTS AND EXPORTS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

1957-1958

Diversion name or owner	Location number	Source	Hydrographic unit imported from or exported to	Location number point of import or export	Point of measurement or estimate	Method of observation and calculation	Year	Amount diverted, in acre-feet												Remarks
								Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
						Exports (Continued)														
Shirland Canal* Pacific Gas and Electric Company	(*)	Bear River	American River	12N/3E-15P	Near intake	Water stage recorder and depth-flow relationship	1958	132	122	137*	155	471	551	575	574	547	320	150	140	3,874	Lateral of 17N/11E-36D1 (Boardman Canal). Reported amount for March partially estimated.
Gaylord Canal* Pacific Gas and Electric Company	(*)	Bear River	American River	12N/3E-20Q	At intake	Water stage recorder and depth-flow relationship	1958	31	14	36	28	38	52	53	65	71	46	17	29	480	Lateral of 17N/11E-36D1 (Boardman Canal). Reported amount for January partially estimated.
South Canal* Pacific Gas and Electric Company	(*)	Bear River	American River	12N/3E-32P	0.4 mile below Boardman Canal	Water stage recorder and depth-flow relationship	1958	21600	18300	16700	17400	12500	9470	6720	6040	9120	13400	19800	14600	165,650*	Extension of 15N/9E-22Q1 (Bear River Canal). Reported total was spill to North Fork American River.
Monte Rio Pipe* Pacific Gas and Electric Company	(*)	Bear River	American River	11N/8E-5H	At intake	Staff gage and depth-flow relationship	1958	-	20	21	17	42	62	68	60	42	37	15	18	402*	Lateral of 17N/11E-36D1 (Boardman Canal). Reported total is for 2/1/58 - 12/31/58 only.
Nevada Irrigation District	(*)	Augmented flow of Auburn Ravine	Sacramento Valley Floor	12N/6E-15N	Below Hemphill Ditch Diversion	Water stage recorder and depth-flow relationship	1958	0	0	0	0	3020	2220	2860	2710	410	0	0	0	11,220*	Reported amounts represent the portions of the flow in Auburn Ravine delivered by Nevada Irrigation District to users outside the district.
Mahle Ditch and Loma Rica Ditch* Browns Valley Irrigation District	(*)	North Yuba River	Feather River	17N/5E-22F	At intake	Staff gage and depth-flow relationship	1957	-	-	-	241	442	419	416	433	361	113	151	74	2,650*	Laterals of 17N/7E-16H1 (Browns Valley Ditch). Reported total is for 3/27/57 - 12/31/57 only.
Olive Hill Ditch* Browns Valley Irrigation District	(*)	North Yuba River	Sacramento Valley Floor	16N/5E-4B	At intake	Staff gage and depth-flow relationship	1957	-	-	24	148	295	269	274	260	204	68	80	59	1,681*	Lateral of 17N/7E-16H1 (Browns Valley Ditch). Reported total is for 3/27/57 - 12/31/57 only.
Browns Valley Ditch Browns Valley Irrigation District	17N/7E-16H1	North Yuba River	Sacramento Valley Floor	16N/5E-20D	Near Highway 20	Staff gage and depth-flow relationship	1957	0	0	0	29	66	63	71	93	91	98	20	20	551	
Frank Carmichael	17N/6E-4H1	Dry Creek	Feather River and Sacramento Valley Floor	18N/6E-8M	3.0 miles below intake	Staff gage and depth-flow relationship	1957	-	-	-	-	-	-	436*	472	558	363	391	230	2,450*	Reported total is for 7/1/57 - 12/31/57. Amount for July partially estimated.

* See remarks
\- Monthly value unknown

1957-1958

Diversion name or owner	Point of measurement or estimate	Method of observation and calculation	Amount diverted, in acre-feet													Remarks
			Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Antelope Creek near Roseville	0.3 mile below Atlantic Street, north of Roseville	Water stage recorder and depth-flow relationship	1957	-	-	-	-	898	268	71	168	392	1087	839	822	4,545*	Reported total if for May - December 1957, only.
			1958	1906	3594	2117*	1999*	849	704	577	475	487	948	786	572	15,014	Amounts for March and April 1958, are partially estimated.
Tributary to Coon Creek near Lincoln	0.4 mile below Highway 99E, 4.2 miles north of Lincoln	Staff gage and depth-flow relationship	1957	-	-	-	-	82	25	4	1	23	40	10	-	185*	Reported total is for 5/1/57 - 11/30/57 only.
			1958	-	-	-	562	17	10	8	0	1	5	12	-	615*	Reported total is for 4/1/58 - 11/30/58 only.
Markham Ravine near Lincoln	At county road east of Highway 99E	Staff gage and depth-flow relationship	1957	-	-	-	-	51	26	20	29	86	217	186	-	615*	Reported total is for 5/1/57 - 11/30/57 only.
			1958	-	-	-	-	32	43	44	42	49	143	146	83	582*	Reported total is for period 5/1/58 - 12/31/58 only.
Miners Ravine near Roseville	500 feet below Highway 40	Water stage recorder and depth-flow relationship	1957	-	-	-	283	2445	560	296*	433	606	1579	1572	2347	10,121*	Reported total is for 4/25/57 - 12/31/57 only. Amount for July partially estimated.
			1958	4370	-	-	3141*	1640	1210	545	280	580	1110	1630	1540	16,046*	Reported total is for 1/1/58 - 1/31/58 and 4/1/58 - 12/31/58 only. Amount for April partially estimated.
Nigger Creek near Penn Valley	At Bridgeport Road	Staff gage and depth-flow relationship	1958	-	-	-	28	186	180	121	117	121	160	76	68	1,057*	Reported total is for 4/25/58 - 12/31/58 only.
Tributary to Orchard Creek near Lincoln	At Highway 99E, 1.1 miles south of Lincoln	Staff gage and depth-flow relationship	1957	-	-	-	-	-	12	10	5	8	6	15	-	56*	Reported total is for 5/20/57 - 11/30/57 only.
			1958	-	-	-	-	9	6	8	0	12	13	12	2	62*	Reported total is for 5/1/58 - 12/31/58 only.
Squirrel Creek near Penn Valley	0.5 mile below Bridgeport Road	Water stage recorder and depth-flow relationship	1958	-	-	-	532	823	511	214	189	251	484	423	421	3,848*	Reported total is for 4/19/58 - 12/31/58 only.
Squirrel Creek near Sunset View	0.7 mile southwest of Sunset View, above Rough and Ready Ditch	Staff gage and depth-flow relationship	1958	-	-	-	43	193	132	50	36	40	45	38	34	611*	Reported total is for 4/25/58 - 12/31/58 only.

* See remarks
\- Monthly value unknown

Consumptive Use

Consumptive use is defined as the quantity of water transpired by plants, retained in plant tissue, and evaporated from the plants and surrounding land and water surfaces. This also includes water similarly consumed by urban and nonvegetativ types of land use. In the Yuba-Bear Rivers Hydrographic Unit, the largest quantity of water diverted from surface streams is utilized for the production of hydroelectric power, but by far the largest consumptive use of water is by irrigated agriculture Often the consumptive use of electric power generation is negligible, but, in this unit, evaporation from the large storage reservoirs and extensive canal systems used jointly for power generation and irrigation is significant. In this bulletin, however, no attempt was made to determine consumptive use of wat for uses other than those associated with vegetated areas.

The total annual consumptive use of applied water for irrigation in the Yuba-Bear Rivers Hydrographic Unit is estimate to have been 81,000 acre-feet in 1957 and 1958. This is estimat from the cropping pattern, which was assumed to be the same in 1958 as was surveyed in 1957, and the unit crop consumptive use of applied water values published in State Water Resources Board Bulletin No. 2.

A consumptive use study was conducted in the hydrographic unit to determine the relationship of consumptive use of applied irrigation water to depletion of water supply. This study is described in the following paragraphs.

Consumptive Use Study

The availability of recorded diversion measurements and the hydrologic characteristics of the foothill lands in the Yuba-Bear Rivers Hydrographic Unit offered an unusual opportunity to directly determine the consumptive use of applied water plus incidental consumptive losses, or total depletion of water supply, in several areas. The determination of this total in each of three areas comprised a consumptive use study conducted in 1958. In each study area the total water consumed by the irrigated crops and by other consumptive losses which occurred in the process of delivering water to primary users, concentrating return flows, and rediverting water to secondary users was considered to be equal to the difference between measured inflow and outflow from each area during the period of measurement. A prime factor which made such determinations possible is that there is little or no ground water storage or usage in the foothill areas of the unit. The information resulting from this study will be of value when estimating future water requirements for this and similar foothill areas.

Three predominantly agricultural areas within the unit were chosen for the consumptive use study. These areas, as depicted on Plate 6 entitled "Consumptive Use Study Areas, Yuba-Bear Rivers Hydrographic Unit", are Auburn Ravine-Coon Creek Study Area, Rocklin Study Area, and Squirrel Creek Study Area. In each area water is imported by canals and distributed to the water users, and return flow to natural stream channels is rediverted at several locations for re-use. In the case of the Auburn Ravine-Coon Creek and Rocklin Study Areas, some water is transported through the areas

without use for irrigation. In the summer months streams within the areas are sustained entirely by imported water. Water entering and leaving each area was measured in 1958. By subtracting the outflow from the inflow for each area the portion of water entering the area which was consumed within the area was determined

Flow measurements were made during the principal irrigation period, June through September, for each area except the Auburn Ravine-Coon Creek Study Area where no measurements were made in September. Results of the measurements are shown in Tables 12, 13, and 14.

The total June through September consumptive use of applied water by irrigated crops within each of the three study areas was estimated. These estimates were made by reducing seasonal unit crop consumptive use of applied water values that were published in State Water Resources Board Bulletin No. 2 by 19 percent to account for the partial season period of analysis. The value of 19 percent was determined by utilizing monthly atmometer measurements of evaporation obtained in the area in 1958. The estimated value of consumptive use of applied water by crops is compared with the measured values of total depletion in each area in the following paragraphs. On the average, in the three study areas 63 percent of the total depletion was accounted for by the consumptive use of water by crops. This comparison is an indication of incidental losses that may be incurred in irrigation developments in foothill areas having cultural and irrigation practices similar to those in the areas considered in this study.

Descriptions of the three study areas and calculations of consumptive use are presented in the following paragraphs.

Auburn Ravine-Coon Creek Study Area. Auburn Ravine-Coon Creek Study Area, which comprises the Auburn Ravine and Coon Creek Subunits, has an area of approximately 78,100 acres. These lands range from valley lands north of Lincoln, at an elevation of about 100 feet, to steeply sloping lands near Applegate, at elevations up to 2,100 feet.

The water consumed in this area during the period June through August 1958 was determined from measurements to be 33,200 acre-feet as shown in Table 12. It was estimated, from amounts consumed in the other study areas and from the 1958 atmometer data, that an additional 10,400 acre-feet of water was consumed in September 1958. Thus the supply to the area was depleted by an estimated 43,600 acre-feet of water during the period June through September.

The area under irrigation within the study area was approximately 17,830 acres. The total June through September 1958 estimated consumptive use of applied water by crops on this acreage was 27,400 acre-feet. The crop distribution and the estimated consumptive use by individual crops within the area are tabulated below:

Crop	Area in acres	Estimated consumptive use of applied water by crops June through September 1958	
		Unit value in feet	Total in acre-feet
Pasture	11,000	1.8	19,800
Orchard	6,470	1.1	7,100
Hay (alfalfa)	140	1.8	300
Truck, berry, and grain	120	0.6	100
Field	100	0.8	100
	17,830		27,400

The ratio of the quantity of consumptive use of applied water by crops (27,400 acre-feet) to the total depletion (43,600 acre-feet) indicates that about 63 percent of the total water depleted is consumed by the irrigated crops.

Rocklin Study Area. Rocklin Study Area, with the same boundaries as Rocklin Subunit, has a total area of about 36,700 acres consisting primarily of rolling foothills. As shown in Table 13, approximately 21,400 acre-feet of the water supplied to this area during the period June through September 1958 was depleted. The irrigated area which received water was about 11,070 acres. The total June through September 1958 estimated consumptive use of applied water by crops on this acreage was 13,700 acre-feet. The estimated consumptive use by the individual crops, and the crop distribution within the area are tabulated below:

Crop	Area in acres	Estimated consumptive use of applied water by crops June through September 1958	
		Unit value : in feet :	Total in acre-feet
Pasture	2,030	1.8	3,700
Orchard	8,820	1.1	9,700
Hay (alfalfa)	90	1.8	200
Truck and berry	60	0.6	40
Field	70	0.8	60
	11,070		13,700

The ratio of the quantity of consumptive use of applied water by crops (13,700 acre-feet) to the total depletion (21,400 acre-feet) indicates that about 64 percent of the total water depleted is consumed by the irrigated crops.

Squirrel Creek Study Area. The Squirrel Creek Study Area contains a portion of the Squirrel Creek drainage located west of Grass Valley. The topography within this area is primarily of a rolling foothill nature, but the area contains some steeply sloping lands.

As shown in Table 14, the supply to the area for the period June through September 1958 was depleted by approximately 4,000 acre-feet. The area under irrigation within the study area was approximately 1,400 acres, which consisted almost entirely of pasture lands.

The estimated June through September 1958 consumptive use of applied water by crops on the 1,400 acres of land is 1.8 acre-feet per acre or 2,500 acre-feet. The ratio of this quantity to the total depletion (4,000 acre-feet) indicates that about 63 percent of the total water depleted is consumed by the irrigated crops.

TABLE 12

CALCULATION OF TOTAL CONSUMPTIVE USE OF APPLIED WATER
FOR IRRIGATION IN AUBURN RAVINE-COON CREEK STUDY AREA
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
(In acre-feet)
June-August 1958

Item	June	July	August	Total
Inflow				
Boardman Canal near Applegate	962	938	853	2,753
Bear River Canal above Halsey Forebay	25,700	26,600	24,400	76,700
Ragsdale Tunnel above Bowman Feeder Canal	468	593	630	1,691
Gold Hill Canal near Magnolia No. 1	4,810	4,480	3,510	12,800
Caperton Canal near head	1,050	1,210	1,230	3,490
Total	32,990	33,821	30,623	97,434
Outflow				
Boardman Canal above McCrary Reservoir	1,300	1,470	1,590	4,360
South Canal above Boardman Canal recharge	12,970	10,670	9,696	33,336
Shirland Canal near head	551	575	574	1,700
Dutch Ravine Canal near Newcastle	3,130	3,550	3,510	10,190
Camp Far West Ditch near Valley View School (five locations)	495	495	531	1,521
Coon Creek at Highway 99E	1,178	424	387	1,989
Ewing outflow near Highway 99E	10	8	0	18
Markham Ravine near Lincoln	43	44	42	129
Auburn Ravine at Lincoln	2,777	3,477	3,257	9,511
Caperton Canal near Lincoln	252	375	403	1,030
Lincoln Canal outflow at Highway 99E	6	8	0	14
Correction for Auburn consumptive use	95	150	162	407
Total	22,807	21,246	20,152	64,205
Inflow less outflow	10,183	12,575	10,471	33,229
Approximate total, June-August consumptive use of applied water for irrigation				33,200

TABLE 13

CALCULATION OF TOTAL CONSUMPTIVE USE OF APPLIED WATER
FOR IRRIGATION IN ROCKLIN STUDY AREA
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
(In acre-feet)
June-September 1958

Item	June	July	August	September	Total
	Inflow				
South Canal above Boardman Canal recharge	12,970	10,670	9,696	12,047	45,383
Boardman Canal above McCrary Reservoir	1,300	1,470	1,590	1,580	5,940
Dutch Ravine Canal near Newcastle	3,130	3,550	3,510	3,070	13,260
Total	17,400	15,690	14,796	16,697	64,583
	Outflow				
Gaylord Canal near head	52	53	65	71	241
South Canal below Boardman Canal recharge	9,470	6,720	6,040	9,120	31,350
Monte Rio Pipe near head	62	68	60	42	232
Antelope Creek near Roseville	704	577	475	487	2,243
Miners Ravine near Roseville	1,210	545	280	580	2,615
Caperton Canal near head	1,050	1,210	1,230	1,090	4,580
Deliveries to the City of Roseville and Southern Pacific Company from the Roseville Regulator	402	427	513	490	1,832
Correction for domestic consumptive use	17	24	26	17	84
Total	12,967	9,624	8,689	11,897	43,177
Inflow less outflow	4,433	6,066	6,107	4,800	21,406
Approximate total June-September consumptive use of applied water for irrigation					21,400

TABLE 14

CALCULATION OF TOTAL CONSUMPTIVE USE OF APPLIED WATER
FOR IRRIGATION IN SQUIRREL CREEK STUDY AREA
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
(In acre-feet)
June-September 1958

Item	June	July	August	September	Total
Inflow					
Smith Gordon Ditch near Indian Springs	430	432	483	408	1,753
Tunnel Ditch near head	999	926	999	984	3,908
Rough and Ready Ditch near Bitney Corner	143	138	139	147	567
Squirrel Creek near Rough and Ready	132	50	36	40	258
Total	1,704	1,546	1,657	1,579	6,486
Outflow					
Pet Hill Ditch at Highway 20	2	10	10	16	38
Van Tiger Ditch at Bridgeport Road	62	76	68	57	263
Bald Hill Ditch near Indian Springs	102	87	112	113	414
Smith Gordon Ditch Outflow No. 1 near Indian Springs	1	1	2	1	5
Smith Gordon Ditch Outflow No. 2 near Indian Springs	5	5	5	5	20
Squirrel Creek near Bridgeport Road	511	214	189	251	1,165
Nigger Creek at Bridgeport Road	180	121	117	121	539
Total	863	514	503	564	2,444
Inflow less outflow	841	1,032	1,154	1,015	4,042
Approximate total June-September consumptive use of applied water for irrigation					4,000

TABLE 15

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Diversion name or owner	Location number	Subunit	References	
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Aitken, Ralph B. and Julia H.	11N/7E-17M1	Rocklin	23	73, 93, 157, C-16, C-29
Alleghany Water District	19N/10E-34B1 19N/10E-34N1	Alleghany	7	29, 33, 41, C-29
Allen, Tom E.	12N/7E-19P1	Orchard-Pleasant Grove Creeks	22	70, 156, C-23
Allen, Walter	13N/7E-32H1 13N/7E-32H2 13N/7E-32K1	Coon Creek Coon Creek Coon Creek	21 21 21	51, 88, 151 51, 88, 151 51, 88, 151
Alta Powerhouse Afterbay	See Pacific Gas and Electric Company			
Amaral, A. M. Nishimoto, Iwami	12N/8E-17K1 12N/8E-17K2	Auburn Ravine Auburn Ravine	22 22	44, 149, C-13 44, 149
Amodei, S. (Mrs.)	See Hemphill Ditch			
Anderson, Albert	20N/12E-22R1	Sierra City	5	76, 159, C-21
Anderson, Vincent H.	12N/7E-2Q1 12N/7E-12D1	Coon Creek Coon Creek	22 22	49, 87, 150 49, 87, 151
Arbogast Brothers	17N/9E-35E1	French Corral	13	65, 90, 154
Auburn Ravine Canal	See Nevada Irrigation District			
Bachels, Andrew	19N/10E-8C1	Goodyears Bar	7	68, 91
Bachels, Joseph P.	20N/10E-32L1	Goodyears Bar	4	69, 91, 155, C-21
Bagdanoff, Peter J.	13N/7E-32Q1	Coon Creek	21	51, 151
Baker, Fred N.	19N/8E-31G1	Bullards Bar	6	46, 86, 149
Ball, J. H.	15N/8E-14J1	Wolf Creek	18	78, 95, 159
Barton, C. S.	13N/7E-16Q1	Coon Creek	21	50, 87, 151
Bartsch, Francis J. and Ruth	18N/8E-20Q1	Pike	9	72, 92, 156, C-20
Bean Ditch	See Soper-Wheeler Company			
Bear River Canal	See Pacific Gas and Electric Company			
Bellet, Edward	17N/8E-2J1	French Corral	12	64, 154
Bellet, Vincent	17N/8E-1N1 17N/8E-1P1	French Corral French Corral	12 12	63, 90, 154 63, 154
Bertoglio, John C.	13N/7E-33H1	Coon Creek	21	51, 152
Best Mines Company, Inc.	19N/10E-18J1	Goodyears Bar	7	68, 91, C-25
Boutler, Edwin A.	16N/8E-20M1	Deer Creek	16	54, 153
Big French Reservoir	See Trubschenck, Lorin N.			
Black, Cecil and Soledad A.	11N/7E-15D1	Rocklin	23	73, 157, C-27

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Black, Clarence	15N/7E-25H1	Dry Creek	17	61, 89, 153, C-26
Blue Lake	See Pacific Gas and Electric Company			
Boardman Canal	See Pacific Gas and Electric Company			
Boisa, Joe	11N/7E-20G1	Rocklin	23	73, 93, 158, C-16
Bonnifield, Floyd Hughes Reservoir	12N/6E-14R1	Orchard-Pleasant Grove Creeks	22	70
Boorinakis, George	12N/8E-3F1	Auburn Ravine	22	43, 85, 148
Bowman Lake (	See Nevada Irrigation District			
Bowman-Spaulding Conduit	See Nevada Irrigation District			
Boyington, John E.	11N/7E-11C1	Rocklin	23	72, 93, 157
	11N/7E-11C2	Rocklin	23	72, 93, 157
Boy Scouts of America-Marin Council Chubb Lake	17N/12E-22G1	Donner Pass	14	57, C-23
Brennan, Martha A. (Mrs.)	11N/8E-6Q1	Rocklin	23	75, 158
Brewer, G. W.	15N/8E-13F1	Wolf Creek	18	78, 95, 159
Brown, Dwight	11N/8E-18B1	Rocklin	23	75, 94, 158
Brown, Edward J., Boy, and K.	11N/7E-27L1	Rocklin	23	74, 93, 158, C-33
Brown, Joe G. and Blanche	19N/9E-20N1	Goodyears Bar	7	68, C-25
	19N/9E-21L1	Goodyears Bar	7	68, C-25
	19N/9E-29A1	Goodyears Bar	7	68, C-25
Brown, Leland H.	16N/8E-14C1	Deer Creek	16	54, 153
Browns Valley Irrigation District	17N/7E-16H1	Pike	12	11, 33, 71, 106, 108, 153, 157, D-4, D-30
Buck, Ted C.	14N/8E-9L1	Wolf Creek	20	77, 159
Bullards Bar Reservoir	See Pacific Gas and Electric Company			
Burda, Bert L.	17N/8E-9Q1	French Corral	12	64, 90, 154, C-30
	17N/8E-16B1	French Corral	12	64, 154, C-30
Burris, Burris, Burris, and Hoxworth	17N/5E-27R1	French Dry Creek	12	66, 91, 155
Butz, George	18N/8E-15R1	Pike	9	71, 92, 156
Butz, M. C.	See Cunningham Ditch			
Byers, W. D. and Bertha	12N/6E-12K1	Auburn Ravine	22	42, 148, C-23
Cal-Ida Lumber Company	19N/9E-6A1	Goodyears Bar	7	67, 91, C-20
	19N/9E-6P1	Goodyears Bar	7	68, C-20
California Debris Commission Englebright Reservoir	16N/6E-14P1	French Dry Creek	15	8, 27, 66, C-17, C-19, D-27, D-31

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California State Department of Fish and Game Downey Lake	18N/12E-26L1	Donner Pass	11	60
Calkins, Earl G.	13N/7E-30R1	Coon Creek	21	51, 88, 151
Callejo, Salvador S.	17N/6E-11E1	French Dry Creek	12	67, 155
Camp Far West Canal	See Nevada Irrigation District			
Camp Far West Irrigation District Camp Far West Reservoir	14N/6E-21L1	Camp Far West	19	30, 47, 105, C-13 C-19
Camp Far West Reservoir	See Camp Far West Irrigation District			
Camptonville Water Service	18N/8E-1M1	Bullards Bar	9	33, 45, 86
Carlton, Merrill H.	12N/7E-24A1	Auburn Ravine	22	43, 85, 148
Carmichael, Frank	17N/6E-4H1	French Dry Creek	12	39, 66, 105, 108, C-21, D-7
Carr, John H. Draper, Ervan E.	12N/7E-32N1	Rocklin	22	75, 158, C-12
Cascade Canal	See Nevada Irrigation District			
Casper, Kenneth J.	14N/7E-33C1	Camp Far West	19	47, 87, 150
Cassano, Julius A.	19N/8E-35J1	Bullards Bar	6	46, 86, 149
Castle, Don L. and Lillian D.	13N/8E-26F1	Coon Creek	21	52, 88, 152, C-24
Central Pacific Railroad Company				
Crystal Lake	17N/12E-24K1	Donner Pass	14	57
Lake Angela	17N/15E-16E1	Donner Pass	14	58
Lake Mary	17N/15E-20A1	Donner Pass	14	58
Chamberlain Estate Company	13N/6E-29H1	Coon Creek	21	49, 87, 151
Chase, Ed	20N/10E-20B1	Goodyears Bar	4	68
Childers, Roy D. and Geraldine, et al.	17N/8E-2M1	Pike	12	71, 156
	17N/8E-3A1	Pike	12	71, 156, C-33
China Ditch	See Nevada Irrigation District			
Chubb Lake	See Boy Scouts of America-Marin Council			
Clay, P. T.	14N/8E-21R1	Wolf Creek	20	78, 94, 159
Clingan, M. C.	15N/7E-23E1	Dry Creek	17	61
Colgate Tunnel	See Pacific Gas and Electric Company			
Comrie, F.	11N/7E-16H1	Rocklin	23	73, 157, C-22
Conley, Frank E.	12N/7E-18D1	Auburn Ravine	22	43, 85, 148
Coombes, Cordelia	18N/10E-31P1	Washington	10	77, 159

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Coon Creek Pump	See Nevada Irrigation District			
Costa, Martin	19N/7E-18E1	French Dry Creek	6	67, 155
Cottonwood Lake	See Hidden Valley Community Association			
Cox, Elmo C.	16N/9E-29M1	Greenhorn Creek	16	69, 92, 155
Croft, Charles P.	11N/7E-16Q1	Rocklin	23	73
Crossley, Frank W. and Ora I.	11N/7E-10H1	Rocklin	23	72, 93, 157, C-29
Crystal Lake	See Central Pacific Railroad Company			
Cunningham Ditch Butz, M. C. Cunningham, W. C. (Mrs.)	18N/8E-15A1	Pike	9	71, 92, 156
Cunningham, W. C. (Mrs.)	See Cunningham Ditch			
D-S Canal	See Nevada Irrigation District			
Davies, William L.	17N/9E-28N1	French Corral	13	65, 90, 154
Davis, Harry M.	17N/9E-34K1	French Corral	13	65, 90, 154
Day, Alice (Mrs.)	11N/8E-7B1	Rocklin	23	75, 94, 158, C-31
Deer Creek Reservoir	See Nevada Irrigation District			
Dieterich, J. W. and Nellie E. Varni, Joe	12N/7E-23H1	Auburn Ravine	22	43, 85, 148, C-27
Dimmler, C. L.	12N/7E-24F1	Auburn Ravine	22	43, 85, 148
Doty's South Canal	See Nevada Irrigation District			
Dow, E. L.	17N/8E-4R1	Pike	12	71, 156
Downey Lake	See California State Department of Fish and Game			
Downieville Public Utility District	20N/10E-14D1	Goodyears Bar	4	68, 91
	20N/10E-26K1	Goodyears Bar	4	69, 91
Draper, Ervan E.	See Carr, John H.			
Drum Canal	See Pacific Gas and Electric Company			
Duckels, Neal W.	16N/5E-12C1	French Dry Creek	15	65, 90, 154
	16N/5E-12G1	French Dry Creek	15	66, 90, 155
Dudley, Louis F.	17N/7E-26F1	French Corral	12	63, 154
Dutch Flat Tunnel	See Pacific Gas and Electric Company			
Elliott, P. W.	21N/10E-36R1	Goodyears Bar	2	69
McCalister, Mary Ann, et al.	21N/11E-18R1	Goodyears Bar	3	69, C-18
	21N/11E-31C1	Goodyears Bar	3	69, C-18
Ellsworth, W. R.	19N/9E-8L1	Goodyears Bar	7	68, 91, C-20

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	15N/8E-30K1	Dry Creek	18	61, 153
Englebright Reservoir	See California Debris Commission			
Ennor, Jesse	19N/13E-20A1	Alleghany	8	41, 148, C-12
Enzler, Ralph E.	13N/8E-22E1	Coon Creek	21	52, 152, C-26
Excelsior Ditch	See Nevada Irrigation District			
Fanini, Jack	12N/8E-4D1	Auburn Ravine	22	44, 148
	12N/8E-4D2	Auburn Ravine	22	44, 148
Farnsworth, F. N.	18N/8E-33M1	Pike	9	72, C-20
Feeley Lake Lower	See Pacific Gas and Electric Company			
Feeley Lake Upper	See Pacific Bas and Electric Company			
Ferreira, Domingos	12N/7E-3E1	Coon Creek	22	49, 150
Ferreira, Mary G. (Mrs.)	13N/7E-35A1	Coon Creek	21	52, 88, 152, C-31
Ferry, Manuel A. (Jr.)	13N/7E-33E1	Coon Creek	21	51, 151, C-25
Fischer, M. P.	19N/10E-8F1	Goodyears Bar	7	68, 91, C-18
Flury, Leo	15N/8E-22L1	Wolf Creek	18	79, 95, 160
	15N/8E-22P1	Wolf Creek	18	79, 95, 160
Fordyce Lake	See Pacific Gas and Electric Company			
Forster, Edward R.	12N/8E-7F2	Coon Creek	22	49, 87, 151
Forsythe, (Mrs.)	See Hemphill Ditch			
Fournier, Edward J.	20N/11E-25D1	Sierra City	5	76, 159
French C. C. Turnell, S. I.	16N/5E-10B1	French Dry Creek	15	65, 154, C-22
French Lake	See Nevada Irrigation District			
Fuller Lake	See Pacific Gas and Electric Company			
Gallino, Manuel	16N/9E-26G1	Wolf Creek	16	80, 160
Garcia, Joe L.	12N/7E-12H1	Coon Creek	22	49, 87, 151
Garofalo, Victor	15N/8E-23N1	Wolf Creek	18	79, 95, 160
Gelhaus, A. F.	15N/9E-10C1	Greenhorn Creek	18	69, 155
	15N/9E-10G1	Greenhorn Creek	18	69, 155
Givens, Clint	18N/6E-34Q2	French Dry Creek	9	67, 91, 155
Glenn, Gordon Harris, M. A.	11N/7E-1C1	Rocklin	23	72, 93, 157
Gold Hill Canal	See Nevada Irrigation District			

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Granite Lake	See Lakeview Hills Association			
Grebin, Howard A. and Tillie E.	12N/7E-17K1	Auburn Ravine	22	43, C-26
Griffing, Walter S. and Annie E.	12N/6E-12C1	Auburn Ravine	22	42, 148, C-23
Guiliford, Adrian	12N/6E-2H1	Auburn Ravine	22	42, 150
Gulbranson, Gordon I. and Beth L.	11N/7E-20P3	Rocklin	23	74, 93, 158, C-31
Haffey, Barbara J. Jaquith, Vernon S. and Edna	14N/9E-4G1	Combie	20	48, 150, C-25
Hamasaki, Take	13N/7E-26J1	Coon Creek	21	50, 87, 151
Hammill, Malcolm	16N/8E-24K1	Wolf Creek	16	80, 95, 160
Hannaman Ditch	See Nevada Irrigation District			
Harris, M. A.	11N/7E-2A1	Rocklin	23	72, 93, 157
Harris, M. A.	See Glenn, Gordon			
Harvey, Andrew M.	15N/8E-28A1	Wolf Creek	18	79, 95, 160
Hass, E. S.	16N/7E-33C1	Deer Creek	15	54, 153
Heilman, C. F. and J. K.	19N/11E-6F1	Sierra City	7	76, C-21
Hemphill Ditch Amodei, S. (Mrs.) Forsythe, (Mrs.) Lewis, E. H. (Mrs.) Nevada Irrigation District	12N/6E-13A1	Auburn Ravine	22	42, 85, 148, C-15
Henriques, August	13N/8E-31D1	Coon Creek	21	53, 152
Herold, May (Mrs.) Rossi, Bernice Herold (Mrs.)	13N/7E-31H1	Coon Creek	21	51, 88, 151
Hidden Valley Community Association	11N/7E-35A1	Rocklin	23	74, C-23
Cottonwood Lake	11N/7E-35K1	Rocklin	23	75, C-24
Hill, Malcolm R.	16N/7E-23N1	Deer Creek	15	53, 89, 153, C-25
Hilliard, Joy	16N/8E-4E1	French Corral	16	63, 90, 154
Hopper, Arthur B.	13N/7E-19R1	Coon Creek	21	50, 87, 151
	13N/7E-30B1	Coon Creek	21	50, 88, 151
	13N/7E-30G1	Coon Creek	21	50, 88, 151
Horath, Frank P.	12N/8E-16H1	Auburn Ravine	22	44, 149
Horton, R. E. and Ruby	11N/7E-10P1	Rocklin	23	72, 93, 157, C-24
Howard, Harry	19N/6E-35M1	French Dry Creek	6	67, 155
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Idaho-Maryland Ditch	See Oro Lumber Company			
Ingersoll, E. A.	18N/7E-33M1	Pike	9	34
Island Lake	See Nevada Irrigation District			
Jacinto, Manuel	12N/8E-7F1	Coon Creek	22	49, 87, 151
Jackson Lake	See Nevada Irrigation District			
Jamison Ditch	See McDaniel, H. V.			
Jaquith, Vernon S. and Edna	See Haffey, Barbara J.			
Johnson, Elmer A. and Mattie Van Dyke	12N/7E-19A1	Auburn Ravine	22	43, 85, 148, C-20
Johnson, Floyd	21N/10E-4B1	La Porte	2	70
Johnson, G. G.	12N/8E-17B1	Auburn Ravine	22	44, 86, 149
Jones, Dennis and Muriel	14N/8E-20K1	Wolf Creek	20	78, 159
Jordon, Yale H.	15N/8E-22R1	Wolf Creek	18	79, 160
Kehn, M. Morris Reservoir	17N/8E-6R1	Pike	12	71, 92, 156, C-15
Kelley, Thomas J. Wentsch, Harold E.	11N/7E-34H1	Rocklin	23	74, 158, C-23, C-26
Kholes, Joseph and Gladys Maxwell, June I.	11N/7E-12C1	Rocklin	23	73, 157, C-24
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Kohler, Ed J.	19N/9E-31K1	Bullards Bar	7	46, 149
LaFaille, Ray and Lillian	12N/7E-21C1	Auburn Ravine	22	43, 85, 148, C-18
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Lake Combie	See Nevada Irrigation District			
Lake Culbertson	See Pacific Gas and Electric Company			
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Lake Mildred	See Yuba Investment Company			
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Lewis, I. C. Wyatt, L. E.	11N/7E-20J1	Rocklin	23	73
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Lindsey Lake Middle	See Pacific Gas and Electric Company			
Loney, D. M.	17N/9E-27K1	French Corral	13	65, 90, 154
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Maish, C. R. and G. W.	16N/7E-3E1	French Corral	15	63, 154
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Marty, A. J.	13N/8E-14A1	Coon Creek	21	52, 152
Mavrias, George	11N/6E-25G1	Rocklin	23	72, 92, 157, C-16
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McAdoo, James S.	12N/7E-29N1	Rocklin	22	75, 158
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McElroy, Frank C.	13N/7E-28K1	Coon Creek	21	50, 88, 151
McKenna Mining Company	22N/10E-28B1	La Porte	1	70
Meadow Lake	See Pacific Gas and Electric Company			
Mefford, D. M.	15N/8E-22E1	Wolf Creek	18	79, 95, 160
	15N/8E-27C1	Wolf Creek	18	79, 95, 160
Meredith, George F. and Dixie M.	11N/7E-5R1	Rocklin	23	72, 157, C-14, C-17
Meredith, Mason J.	18N/10E-29P1	Washington	10	77, 94, 159
Milham, C. R. and M. L.	14N/8E-5J2	Wolf Creek	20	77, 94, 159, C-20
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Minona Mining Company Pine Grove Ditch	17N/8E-15D1	French Corral	12	10, 34, 64, 90, 154
Moats, Leslie L. (Sr.) and Violet	13N/7E-26N1	Coon Creek	21	50, 151, C-12
Modglin, Andrew J.	21N/9E-13R1	La Porte	2	70, C-18
Pike, W. H.	21N/10E-7K1	La Porte	2	70, C-18
Mohammed, John G.	12N/7E-4G1	Coon Creek	22	49, 87, 151
Montero, Antonio and Frances	11N/7E-17C1	Rocklin	23	73, 93, 157, C-24
Moran, Alex	18N/7E-3J1	Bullards Bar	9	45, 86, 149
Williams, Lloyd	18N/7E-3K1	Bullards Bar	9	45, 86, 149
Morandi, Charles A.	15N/9E-17M1	Wolf Creek	13	79, 160
	15N/9E-18P1	Wolf Creek	13	79, 160
Morris, Noah and Gracie	11N/7E-16H2	Rocklin	23	73, 157
Morris Reservoir	See Kehn, M.			
Mulligan, Ethel (Miss)	12N/7E-9P1	Auburn Ravine	22	42, 85, 148, C-14
Mulock, Harry	19N/7E-17P1	French Dry Creek	6	33, 67, 91, C-14
Musso, Alvin W.	13N/8E-34H1	Coon Creek	21	53, 89, 152, C-24
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Nasholm, Axel	20N/10E-33A1	Goodyears Bar	4	69, 155
Navas, Theodore M.	12N/7E-36E1	Rocklin	22	75, 158, C-14
Nelson, E. A.	19N/8E-28N1	Bullards Bar	6	46, 86, 149
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Bowman-Spaulding Conduit	18N/12E-8C2	Donner Pass	11	59, 96, C-12, C-13, D-10-D-12, D-21, D-32, D-33
Camp Far West Canal	13N/7E-13N1	Coon Creek	21	50, 98, 99, 116, D-22-D-24
Cascade Canal	17N/10E-34E1	Deer Creek	13	33, 55, 96, C-12, D-14
China Ditch	16N/7E-20E1	Deer Creek	15	12, 33, 53, 97, C-12, D-15, D-16, D-18
Coon Creek Pump	13N/6E-22A1	Coon Creek	21	49, 99, D-25
Doty's South Ditch	13N/6E-36G1	Coon Creek	21	49, 99, D-24
D-S Canal - Deer Creek Reservoir	16N/9E-10B1	Deer Creek	16	33, 39, 55, 97, C-12, D-13, D-15, D-16, D-18, D-19
Excelsior Ditch	17N/8E-27H1	French Corral	12	12, 65, 96, C-12, C-16, C-17, D-15-D-17
French Lake	18N/13E-17P1	Donner Pass	11	60, D-10, D-11
French Ravine Ditch	15N/8E-9K1	Wolf Creek	18	78, 97, D-16, D-19
Gold Hill Canal	13N/8E-3H1	Combie	21	33, 47, 98, 116, C-12, D-9, D-21-D-25, D-27
Hannaman Ditch	14N/7E-28B1	Camp Far West	19	47, 97
Island Lake	18N/12E-27C1	Donner Pass	11	60, D-10, D-11
Jackson Lake	19N/13E-31N1	Donner Pass	8	61, C-12, C-13, D-10, D-11
Magnolia No. 3	13N/8E-2E2	Combie	21	47, 98, D-22
Milton Bowman Tunnel-Milton Reservoir	19N/12E-12N1	Alleghany	8	41, 96, C-13, D-10, D-11
Newtown Ditch	16N/8E-12K1	Deer Creek	16	10, 33, 54, 97, C-12, D-17, D-18
Rough and Ready Ditch	16N/9E-7H1	Deer Creek	16	33, 55, 96, 118, C-12, D-16, D-18, D-20
Sawmill Lake	18N/12E-11D1	Donner Pass	11	59, C-12, C-13, D-10, D-11
Scotts Flat Dam	16N/9E-2R1	Deer Creek	16	30, 55, C-12, D-9, D-13, D-14
Snow Mountain Ditch	17N/10E-32E1	Deer Creek	13	33, 55, 96, C-12, D-18
	17N/10E-32M1	Deer Creek	13	55, 96, D-18
Stone Ditch	16N/8E-25C1	Wolf Creek	16	80, D-14, D-19
Tarr Ditch	15N/8E-10R1	Wolf Creek	18	12, 78, 97, 118, C-11, D-14, D-16, D-19
Tunnel Ditch	16N/8E-18M1	Deer Creek	16	12, 54, 97, 118, C-12, D-18, D-20
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(Trap Creek)	17N/12E-6M1	Donner Pass	14	56, C-12, C-13, C-15-C-17, D-12
(Rucker Creek)	17N/12E-7H1	Donner Pass	14	56, C-16, C-17, D-12
(Clear Creek)	18N/11E-36J1	Donner Pass	10	58, C-15-C-17, D-12
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	13N/7E-28L2	Coon Creek	21	50, 151
Newcomb, Frank H.	12N/7E-16H1	Auburn Ravine	22	42, 85, 148
Newnan, C. E.	15N/9E-30E1	Wolf Creek	18	80
Newmont Mining Company	16N/8E-26P1	Wolf Creek	16	80, 160
	16N/8E-26R1	Wolf Creek	16	80, 160
Newton, Daniel O. and M. W.	14N/8E-22P1	Wolf Creek	20	78, 94, 159, C-31
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Niesen, Carl	16N/7E-35C1	Deer Creek	15	54, 153
Nightingale, Albert J.	16N/7E-26N1	Deer Creek	15	54, 153, C-29
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	13N/7E-34P1	Coon Creek	21	52, 152
Omohundro, Jack	11N/7E-21J1	Rocklin	23	74
	11N/7E-22N1	Rocklin	23	74
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	19N/10E-34N1	Alleghany	7	41, C-12
Oro Lumber Company Idaho-Maryland Ditch	16N/8E-25A1	Wolf Creek	16	80, 95
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Colgate Tunnel	18N/7E-25F1	Bullards Bar	9	45, 101, C-17, D-29, D-30
Drum Canal	17N/12E-20J1	Donner Pass	14	57, 101, 107, C-13, C-14, D-27, D-32, D-34, D-35, D-38
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Fuller Lake	17N/12E-17B1	Donner Pass	14	56, D-32
Kidd Lake	17N/14E-29E1	Donner Pass	14	58, D-33
Lake Culbertson	18N/12E-15N1	Donner Pass	11	59, D-32
Lake Francis	17N/7E-5J1	Pike	12	71, D-6, D-26, D-30
Lake Spaulding	17N/12E-20H1	Donner Pass	14	27, 57, D-10, D-26-D-28, D-31, D-33- D-35
Lake Sterling	17N/13E-10A1	Donner Pass	14	57, D-33
Lake Van Norden	17N/14E-23M1	Donner Pass	14	57, 167, D-33
Lindsey Lake Lower	18N/12E-20H1	Donner Pass	11	59, D-32
Lindsey Lake Middle	18N/12E-21F1	Donner Pass	11	59, D-32
Lower Peak Lake	17N/14E-30R1	Donner Pass	14	58, D-33
Meadow Lake	18N/13E-27B1	Donner Pass	11	60, D-33
Narrows Powerhouse	16N/6E-14Q1	French Dry Creek	15	66, 101, C-17, D-27, D-29, D-31
Rucker Lake	17N/12E-8E1	Donner Pass	14	56, D-32
South Yuba Canal	17N/12E-20J2	Donner Pass	14	12, 57, 99, 101, C-13, C-14, D-26, D-27, D-32, D-33.
Upper Peak Lake	17N/14E-32D1	Donner Pass	14	58, D-33
Upper Rock Lake	18N/12E-15C1	Donner Pass	11	59, D-32
White Rock Lake	18N/14E-22B1	Donner Pass	11	60, D-33
Alta Powerhouse Afterbay	16N/10E-25P1	Dutch Flat	16	61, D-38
Pitman Ravine Flume	16N/11E-9J1	Dutch Flat	16	62, 102, D-38
Pulp Mill Canal (Import from American River Hydrographic Unit)	16N/10E-36Q1		16	61, 102, 107, D-38
Towle Canal (Import from American River Hydrographic Unit)	16N/11E-21E1		16	62, 102, 107, D-37, D-38
Lake Valley Canal (Import from American River Hydrographic Unit)	16N/12E-33B1		14	63, 101, 107, D-35
Packer Lake	See Sierra Buttes Canal and Water Company			
Paquette, Arthur J.	18N/6E-24M1	French Dry Creek	9	67
Parker, Wesley B.	18N/9E-8M1	Pike	10	72, 92, 157
Patton, John A.	12N/7E-36N1	Rocklin	22	76, 94, 158, C-12
Pauly, Erle	18N/8E-8P1	Bullards Bar	9	46, 86, 149
Peacock, J. C. Union Ditch	16N/7E-29E1	Deer Creek	15	54, 89, 153
Pellet, Edgar E. and Ina E.	13N/7E-29B1	Coon Creek	21	50, 88, 151, C-14
Pendola, James and Frank	19N/8E-34B1	Bullards Bar	6	46, 86, 149

TABLE 15 (Continued)

INDEX OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 sheet no.	Page nos. of text and appendixes
Piedmont Campfile Girls Lake Vera	17N/8E-25Q1	French Corral	12	65, 90, C-14
Pike, W. H.	See Modglin, Andrew J.			
Pilliard, Edward and Margaret	14N/8E-35C1	Combie	20	48, 150, C-31
Pine Grove Ditch	See Minona Mining Company			
Pingree, H. O.	15N/8E-15M1	Wolf Creek	18.	79, 95, 159
Poirier, Frank	11N/8E-7N1	Rocklin	23	75, 158
Rahlman, Desral (Mrs.)	13N/7E-29N1	Coon Creek	21	50, 151
Rainey, John	13N/8E-18F1	Coon Creek	21	52, 152
	13N/8E-18F2	Coon Creek	21	52, 152
	13N/8E-19H1	Coon Creek	21	52, 152
Reader, Frank S.	17N/8E-20G1	French Corral	12	64, 90, 154
Reader, Francis J.	17N/8E-20N1	French Corral	12	65, 154
Renfree, Milt	12N/8E-5K1	Auburn Ravine	22	44, 86, 148
Rich, Robert P.	12N/7E-23D1	Auburn Ravine	22	43, 85, 148
Richardson, Howard C. and L. E.	16N/7E-4E1	French Dry Creek	15	66, 155, C-22
	16N/7E-5H1	French Dry Creek	15	66, 155, C-26
Ripley, Paul and Elizabeth	12N/7E-23F1	Auburn Ravine	22	43, 85, 148, C-22
Robbins, E. H. and Callie J.	14N/8E-32D1	Combie	20	48, 150, C-13, C-27
Robbins, Herman L.	13N/7E-30Q1	Coon Creek	21	51, 151
	13N/7E-30Q2	Coon Creek	21	51, 88, 151
Robinson, C. H. and Bernice G.	14N/8E-17L1	Wolf Creek	20	77, 159, C-28
Robson, George L. and Marion E.	11N/7E-20P2	Rocklin	23	74, 93, 158, C-28
Roeding, George C. (Jr.)	11N/7E-8G1	Rocklin	23	72, 157, C-22
Rogers, Basil T.	11N/8E-6H1	Rocklin	23	75, 158, C-21
Roland, John	14N/9E-29D1	Combie	20	48
Rolph, C. J. (Jr.)	15N/9E-21M1	Combie	18	48, 150, C-24
Rondoni, Antone	15N/9E-18R1	Wolf Creek	18	79, 160
Ross, James	13N/6E-36H1	Coon Creek	21	49, 151

TABLE 15 (Continued)

INDEX OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 sheet no.	Page nos. of text and appendixes
Ross, Susie I. and W. F.	11N/7E-17P1	Rocklin	23	73, 93, 157, C-28
Rossi, Bernice Herold (Mrs.)	See Herold, May (Mrs.)			
Rough and Ready Ditch	See Nevada Irrigation District			
Rucker Lake	See Pacific Gas and Electric Company			
Ruhkala, Ruben J.	11N/7E-20P1	Rocklin	23	74, 93, 158, C-26
Sacramento Box and Lumber Company	19N/7E-9Q1	Bullards Bar	6	46
Salmon, E. O.	12N/8E-7R1	Auburn Ravine	22	44, 148
	12N/8E-7R2	Auburn Ravine	22	44, 148
Samson, Stanley J. and Betty R.	13N/7E-36J1	Coon Creek	21	52, 88, 152, C-26
Sawmill Lake	See Nevada Irrigation District			
Schoonderwoerd, Guy	11N/7E-19R1	Rocklin	23	73, 93, 157
Scotts Flat Dam	See Nevada Irrigation District			
Selvester, James M.	17N/8E-2B1	French Corral	12	64, 154
	17N/8E-2C1	French Corral	12	64, 154
	17N/8E-2F1	French Corral	12	64, 154
Sheehan, Forest	20N/9E-18F1	La Porte	4	70, 156
	20N/9E-18M1	La Porte	4	70, 156
Sierra Buttes Canal and Water Company				
Lower Salmon Lake	21N/12E-28L1	Sierra City	3	77
Lower Sardine Lake	20N/12E-10E1	Sierra City	5	76
Packer Lake	20N/12E-5P1	Sierra City	5	76
Upper Salmon Lake	21N/12E-29H1	Sierra City	3	77
Upper Sardine Lake	20N/12E-9K1	Sierra City	5	76
Sills, Leslie W.	19N/6E-25D1	French Dry Creek	6	67, 91, 155
Smith Bar Ditch	See Smith, Henry P.			
Smith, Earl	16N/10E-36F1	Dutch Flat	16	61, 153
Smith, George and Charles	15N/8E-3E1	Wolf Creek	18	78, 159
Smith, Henry P. Smith Bar Ditch	16N/6E-7L1	French Dry Creek	15	66, 90, 155, C-24, C-25
Snow Mountain Ditch	See Nevada Irrigation District			
Soper-Wheeler Company (Import from Feather River Hydrographic Unit)	20N/8E-20R1	Bullards Bar	4	34, 46, 104, 107, 149
South Yuba Canal	See Pacific Gas and Electric Company			
Souza, I. R. and Mary	13N/7E-34A1	Coon Creek	21	51, 88, 152
	13N/7E-34G1	Coon Creek	21	52, 88, 152, C-12
Staples, Donald and Charles	16N/6E-24L1	Deer Creek	15	53, 89, 152

TABLE 15 (Continued)

INDEX OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 sheet no.	Page nos. of text and appendixes
Stephens, Myron J. and Mona	11N/7E-27M1	Rocklin	23	74, 158, C-21
Stevens, James M.	17N/5E-34K1	French Dry Creek	12	66, 91, 155, C-19, C-21, C-25
Stevenson, J. W.	15N/8E-22M1	Wolf Creek	18	79, 95, 160
Stone Ditch	See Nevada Irrigation District			
Tahoe Sugar Pine Company	17N/11E-4P1	Donner Pass	13	56, 89
Takagishi, David M.	11N/7E-15B1	Rocklin	23	73, 157, C-34
Tarr Ditch	See Nevada Irrigation District			
Thorson, Clifford G.	16N/8E-21G1	Deer Creek	16	54, 153
Traylor, Arthur L.	12N/7E-33E1	Rocklin	22	75, 94, 158
Tresler, J. W.	18N/6E-36B1	French Dry Creek	9	67, 155
Trubschenck, Lorin N. Big French Reservoir	17N/8E-4N1	Pike	12	71, 156, C-30
Tunnel Ditch	See Nevada Irrigation District			
Turnell, S. I.	See French, C. C.			
Ueland, Andrew	16N/9E-32D1	Greenhorn Creek	16	69, 92, 155
Union Ditch	See Peacock, J. C.			
Upper Peak Lake	See Pacific Gas and Electric Company			
Upper Rock Lake	See Pacific Gas and Electric Company			
Upper Salmon Lake	See Sierra Buttes Canal and Water Company			
Upper Sardine Lake	See Sierra Buttes Canal and Water Company			
Van Tiger, Roy	16N/7E-21N1	Deer Creek	15	53, 89, 152
	16N/7E-22N1	Deer Creek	15	53, 89, 152
Varnie, Joe	See Dieterich, J. W. and Nellie E.			
Walkenhorst, J. M. (Jr.)	14N/8E-5J1	Wolf Creek	20	77, 159
Walters, Pat	12N/7E-20B1	Auburn Ravine	22	43, 148, C-21
Webb, James E. and Elsie W.	13N/8E-34F1	Coon Creek	21	53, 88, 152, C-24
Welch, O'Farrell	11N/7E-23J1	Rocklin	23	74, C-23
Welles, Lucy (Miss)	16N/9E-32M1	Greenhorn Creek	16	69, 92, 155
Wentsch, Harold E.	See Kelley, Thomas J.			
Westall, Amy Wear	20N/12E-30H1	Sierra City	5	76
Wheeler, Katie M. (Mrs.)	15N/8E-12P1	Wolf Creek	18	78, 94, 159

TABLE 15 (Continued)

INDEX OF SURFACE WATER DIVERSIONS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

Diversion name or owner	Location number	Subunit	References	
			Plate 2 sheet no.	Page nos. of text and appendixes
White, L. M.	17N/8E-11F1	French Corral	12	64
White Rock Lake	See Pacific Gas and Electric Company			
Whitehead, Edna A. (Mrs.)	19N/7E-14H1	Bullards Bar	6	46, 149
Williams, Lloyd	See Moran, Alex			
Winslow, Ralph J. and Lois	16N/7E-35D1	Deer Creek	15	54, 153
	16N/7E-35D2	Deer Creek	15	54, 153
Wollam, Carl C.	14N/8E-20G1	Wolf Creek	20	78, 159, C-32
Wright, M. A. (Mrs.)	19N/10E-8A1	Goodyears Bar	7	68
Wyatt, L. E.	See Lewis, I. C.			
Young, Murray and Edith E.	14N/8E-20R1	Wolf Creek	20	78, 159, C-31
Yuba Investment Company Los Verjeles Dam	18N/6E-34Q1	French Dry Creek	9	67, C-13

CHAPTER III. LAND USE

The results of a survey of water uses and water facilities in the Yuba-Bear Rivers Hydrographic Unit were presented in Chapter II. In this chapter are reported the results of a survey of present land uses as related to water use. Also included is a brief summary of historical conditions. A thorough knowledge of the nature and extent of land and water uses under existing conditions within this hydrographic unit is one of the primary requisites in evaluating future water requirements within the unit.

Historical Land Use

As previously noted, the early development of the Yuba-Bear Rivers Hydrographic Unit paralleled closely the mining of gold,and many miners who failed turned to farming for their living. The majority of the lands under cultivation in the early years were producing fruit which started with the experimental planting of peach and almond seeds in 1846 along the Bear River flood plain, and soon extended to the nearby foothills. In addition to these orchards, extensive brush and timberlands were cleared for the production of barley, wheat, oats, and other crops. Although mining decreased after 1852, agricultural lands steadily increased until 1880 when the mines in Nevada closed. Very little agricultural activity took place from this time until during and after World War I when, with an increased demand

agricultural lands expanded and irrigation facilities improved. According to U. S. Census records, the irrigated area in Placer County, to which nearly all water was supplied by Pacific Gas and Electric Company, increased from 16,845 acres in 1910 to 27,520 acres in 1920.

In Nevada County a rapid expansion of agriculture took place with the development of Nevada Irrigation District in the 1920's and 1930's. In 1929, the former Division of Engineering and Irrigation reported in its first issue of Bulletin 21, "Irrigation Districts in California," that 11,704 acres were then irrigated within the Nevada Irrigation District and that only about one-third of the Nevada County portion of the district's distribution system was complete, and none of the Placer County portion was complete. Also reported was that one-third of the area irrigated in Nevada County was devoted to orchard crops and the remaining two-thirds was producing forage crops, while in Placer County practically all of the irrigated lands were in orchard. At that time, 32,000 acres in Nevada County and a large percentage of the area in Placer County had been cleared to receive water from the district. Lands adjoining the communities of Nevada City and Auburn were prominent in this agricultural development.

During the depression years of the 1930's, agricultural development again declined, with the possible exception of orchard Since that time irrigated agriculture and the raising of livestock has increased.

Present Land Use

A detailed survey of land uses in the Yuba-Bear Rivers Hydrographic Unit was conducted during the spring of 1957 as part of this investigation. The land uses mapped in this survey as related to water use fall into four major categories: irrigated lands, dry-farmed lands, urban lands, and recreational lands; and one minor category: naturally high water table lands, such as natural meadowlands. Lands not falling into any of these five categories were mapped as native vegetation. The various types of land uses mapped in 1957 are delineated on sheets 1 through 23 of Plate 2. The acreages of land uses within each subunit are presented in Table 16. The values represent gross acreages, including nonwater service areas such as roads, ditches, buildings, and storage areas and miscellaneous rights-of-way which occur within the mapped areas.

At the time of the survey, Beale Air Force Base was relatively inactive, and most of the facilities were unused. The developed areas were shown neither as urban nor military areas. Irrigated lands within the boundaries of the base were delineated as such.

Methods and Procedures

The land use survey and the location of surface water diversions were accomplished by relating field observations to aerial photographs having a scale of about 1:20,000. Stereoscopes were used to assist in the field mapping procedure.

As each point of diversion was located, it was plotted on the aerial photographs, and as the use of each parcel of land was determined, it was delineated on the aerial photograph. The hydrographic unit was traversed by automobile as completely as roads and terrain permitted. When necessary because of poor accessibility, inspections were made on foot. An example of an aerial photograph with land use data delineated on it is shown on page 141.

After completion of the field mapping, the data delineated on the photographs were transferred to copies of U. S. Geological Survey quadrangle maps reproduced at a scale of 1:24,000. This procedure was necessary to bring the delineated areas to a common scale for accurate determination of acreages, since the scale of the aerial photographs utilized varied widely. A series of these maps, showing the location of all diversions and the fields associated with each irrigation diversion, was reviewed by local representatives. These work maps were then used in the preparation of Plate 2.

Prints of these maps were used in computing the acreages of the land uses. Each delineated area on these maps was manually cut out and was carefully weighed on an analytical balance. The weights were converted to acreages, using ratios determined for each map. This method has proven to be an expeditious and accurate means of area determination where a large number of small parcels is involved.

TABLE 16

LAND USE IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957
(In acres)

Subunit and County	Irrigated lands	Naturally high water table lands		Dry-farmed lands	Urban lands	Recreational lands
		Meadowlands	Marsh lands			
Alleghany						
Nevada County	0	400			20	40
Sierra County	60	360			50	0
Total	60	760	0	0	70	40
Auburn Ravine						
Placer County	6,890	30	10	350	1,600	0
Bullards Bar						
Butte County	0	0		0	0	0
Sierra County	10	0		0	0	0
Yuba County	190	20		30	60	30
Total	200	20	0	30	60	30
Camp Beale						
Yuba County	90	0	0	400	0	0
Camp Far West						
Nevada County	990	20		0		
Placer County	650	0		950		
Yuba County	0	0		0		
Total	1,640	20	0	950	0	0
Combie						
Nevada County	830	60		70	20	0
Placer County	520	0		110	150	10
Total	1,350	60	0	180	170	10
Coon Creek						
Placer County	11,090	0	30	970	580	0
Deer Creek						
Nevada County	2,500	20	20	140	1,260	30
Yuba County	0	0	0	0	0	0
Total	2,500	20	20	140	1,260	30
Donner Pass						
Nevada County		1,460				510
Placer County		170				230
Total	0	1,630	0	0	0	740
Dry Creek						
Nevada County	2,010	10		30		
Yuba County	0	0		140		
Total	2,010	10	0	170	0	0
Dutch Flat						
Nevada County	0	160		10	0	10
Placer County	20	150		130	140	0
Total	20	310	0	140	140	10
French Corral						
Nevada County	1,300	80	0	70	50	20

TABLE 16 (Continued)

LAND USE IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957
(In acres)

Subunit and County	Irrigated lands	Naturally high water table lands		Dry-farmed lands	Urban lands	Recreational lands
		Meadowlands	Marsh lands			
French Dry Creek						
Butte County	0	0		0	0	
Nevada County	180	0		0	0	
Yuba County	2,370	450		140	290	
Total	2,550	450	0	140	290	0
Goodyears Bar						
Sierra County	10	280		20	170	200
Yuba County	0	0		0	0	0
Total	10	280	0	20	170	200
Greenhorn Creek						
Nevada County	270	90	0	40	20	0
La Porte						
Plumas County	0	0			60	10
Sierra County	10	30			0	0
Yuba County	10	10			0	0
Total	20	40	0	0	60	10
Orchard-Pleasant Grove Creeks						
Placer County	350	10	10	70	560	0
Pike						
Nevada County	70	30		90	110	0
Sierra County	20	20		10	0	30
Yuba County	70	20		0	80	40
Total	160	70	0	100	190	70
Rocklin						
Placer County	11,180	20	20	1,100	890	0
Sierra City						
Sierra County	30	1,270	0	0	50	370
Washington						
Nevada County	30	60	0	0	150	10
Wolf Creek						
Nevada County	2,660	30	0	30	1,710	0
SUMMARY:						
BUTTE COUNTY	0	0	0	0	0	0
NEVADA COUNTY	10,840	2,420	20	480	3,340	620
PLACER COUNTY	30,700	380	70	3,680	3,920	240
PLUMAS COUNTY	0	0	0	0	60	10
SIERRA COUNTY	140	1,960	0	30	270	600
YUBA COUNTY	2,730	500	0	710	430	70
TOTAL	44,410	5,260	90	4,900	8,020	1,540

Example of Land Use delineated on aerial photograph

Symbols used on this photograph

ip1 - irrigated alfalfa
ip3 - irrigated mixed pasture
ip4 - irrigated native pasture
iC6 - irrigated olives
iD1 - irrigated apples
iD5 - irrigated peaches or nectarines
iD5Y - nonbearing irrigated peaches or nectarines
iD6 - irrigated pears
iD7 - irrigated plums
iD10 - irrigated miscellaneous deciduous
iD10Y - nonbearing irrigated miscellaneous deciduous
iD7 / iV2 - intercropped irrigated wine grapes and plums
iF8 - irrigated miscellaneous seed crops
iT19 - irrigated bushberries
iT20 - irrigated strawberries
iV2 / iD6Y - intercropped irrigated wine grapes and nonbearing pears
nD6 - nonirrigated pears
nD7 - nonirrigated plums
nD12 - nonirrigated almonds
nG5 - nonirrigated grain hay
nV2 - nonirrigated wine grapes
U - urban
NV - native vegetation

Irrigated Lands

Irrigated lands, as designated in this report, include all agricultural lands which receive water artificially applied. Acreages of irrigated lands are reported in Table 17 by surface water diversion, by subunit, and by crop. Although the irrigated lands are tabulated under the name of the subunit within which the lands are located, it should be noted that the diversion serving the lands may originate in another subunit and that a given diversion may serve lands in more than one subunit. It was not possible to determine the areas of lands served by each diversion in the Nevada Irrigation District system, because of the intermingling of waters from the several diversions. Within each subunit all lands served by the district are combined in a single line entry in Table 17. The lands served by Pacific Gas and Electric Company were similarly treated.

The irrigated lands are segregated in Table 17 into grain and hay crops, field crops, pasture, truck and berry crops, orchard, vineyard, and idle irrigated lands. Hay crops in the area consist entirely of alfalfa. Pasture was further subdivided into mixed, native, and meadow pasture, the latter comprising native pasture lands having a high water table induced by application of irrigation water. Orchard crops are subdivided into deciduous and subtropical. Deciduous orchards are still further subdivided into apples, peaches, pears, plums, mixed and miscellaneous fruits, and miscellaneous nuts.

rrigated pasture
est of
rass Valley

Cattle grazing
south of
Grass Valley

Idle irrigated lands are those lands which were not irrigated in the year of survey but which had been irrigated within the preceding three years. Fallow irrigated lands are those cultivated lands which may have been irrigated during the year of survey, but which at the time of survey were only tilled and not planted to a crop.

The irrigated lands were identified on the work maps by diversion service area, by type of service received in the year of survey, and by crop irrigated, but on Plate 2 they are grouped into three categories: (1) those lands which received a full irrigation during the year of survey, (2) those lands which received only a partial irrigation because of insufficient water supply, and (3) those lands usually irrigated but which were idle or fallow in 1957. The limited acreage irrigated by ground water is included in Table 17 and delineated on Plate 2.

Naturally High Water Table Lands

In addition to the lands which receive applied water as described above, there are lands supporting vegetation which utilize water from a naturally high water table, such as mountain meadows or lands adjacent to lakes and streams. These are shown on Plate 2 as "naturally irrigated meadowlands" and "marshes and swamps."

Dry-farmed Lands

Dry-farmed lands are those lands normally planted to a crop but which do not receive applied water. These include all lands so farmed, whether or not a crop is produced in the

year of survey. Dry-farmed lands are called "idle" if entirely uncultivated in the year of survey and "fallow" if tilled but without a crop. Lands which had been idle for more than three years and appeared to have reverted to "native vegetation" were so mapped.

It should be noted that the term "dry-farmed" as used herein refers to the farming practice on these lands, and not to a lack of soil moisture.

Since noncultivated rangelands are usually indistinguishable from lands with native cover not used for grazing purposes, both types are included in native vegetation. Water use in both cases is essentially the same, and is dependent upon precipitation.

Urban Lands

Urban lands include the total areas of cities, towns, small communities, and industrial plots which are large enough to be delineated. Also included are parks, golf courses, race tracks and cemeteries within or near urban areas. The acreages represent gross delineations, including streets and vacant lots, and are therefore not necessarily fully developed at the present time. In this survey the boundaries of urban communities were delineated to include all lands with a density of one house or more per two acres.

Recreational Lands

Recreational lands were mapped on aerial photographs in the field in four categories: (1) residential, (2) commercial,

(3) camp and trailer sites, and (4) parks. Recreational residential lands include permanent and summer home tracts within a primarily recreational area. The estimated density of homes per acre was also indicated. Recreational commercial lands include those containing motels, resorts, hotels, stores, restaurants, and similar commercial establishments in primarily recreational areas. Lands mapped in the camp and trailer sites category include those areas so used within primarily recreationa areas outside the boundaries of parks. The entire areas within the boundaries of parks are included without regard to the extent of development within them. Obviously, nearly all of the mountainous and water surface areas are suitable for some recreational use such as fishing, hunting, hiking, and picnicking; however, for the purpose of this land use survey, consideration is given only to those lands having some intensive development requiring water service. The recreational lands are combined into one group in Table 16 and on Plate 2.

Native Vegetation

Lands which are essentially in a native state and not included in any of the above categories are mapped as native vegetation. Native vegetation totals some 1,187,000 acres, or 95 percent of the Yuba-Bear Rivers Hydrographic Unit. Included in this area are water surfaces, scattered residences, farm buildings, storage areas, and other uses covering a few acres or less which are too small to be mapped separately. These lands are used to a great extent for mining, commercial timber production, livestock range, and/or recreational activities such as fishing, hunting, hiking and picnicking.

Orchard land north of Newcastle

Furrow irrigation northeast of Lincoln

TABLE 17

IRRIGATED LANDS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Pasture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
							Alleghany Subunit											
19N/13E-20A1	Jesse Ennor	—	—	—	—	63	—	—	—	—	—	—	—	—	—	63	—	63
Total Alleghany Subunit		0	0	0	0	63	0	0	0	0	0	0	0	0	0	63	0	63
							Auburn Ravine Subunit											
12N/6E-12C1	Walter S. and Annie E. Griffing		8	17												25[a]		25
12N/6E-12K1	W. D. and Bertha Byers			35												35		35
12N/6E-13A1	Hemphill Ditch			97	8											105	36	141
12N/7E-9P1	Miss Ethel Mulligan									11						11		11
12N/7E-13G1	Charlee A. Huestis			7							20					27		27
12N/7E-16H1	Frank H. Newcomb			42												42[a]		42
12N/7E-18D1	Frank E. Conley			26												26		26
12N/7E-19A1	Elmer A. and Mattie Van Dyke Johnson			34												34[b]		34
12N/7E-20B1	Pat Walters			20												20		20
12N/7E-21C1	Ray and Lillian LaFaille			18							2					20[a]		20
12N/7E-23D1	Robert P. Rich			29	10							3				42		42
12N/7E-23F1	Paul and Elizabeth Ripley			3								8				11[b]		11
12N/7E-23H1	J. W. and Nellie E. Dieterich Joe Varni			6												6		6
12N/7E-24A1	Merrill H. Carlton										8					8		8
12N/7E-24F1	C. L. Dimmler											13				13		13
12N/8E-3F1	George Boorinakis									12						12		12
12N/8E-4D1 12N/8E-4D2	Jack Fanini			10						5						15		15
12N/8E-5K1	Milt Menfree			14												14		14
12N/8E-7R1 12N/8E-7R2	E. C. Salmon			3												3[a]		3

For lettered footnotes, see last page of table.

YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Pasture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
								Auburn Ravine Subunit (Continued)										
12N/8E-10F1	Everett M. Ludwig			19												19		19
12N/8E-16H1	Frank P. Horath			9												9		9
12N/8E-17B1	G. G. Johnson									7	5					12		12
12N/8E-17K1 12N/8E-17K2	Iwami Nishimoto A. M. Amaral				4					54						58		58
12N/8E-18B1	H. V. Rowland			5												5		5
12N/8E-18C1	Roland C. Lapp											4				4		4
12N/8E-18G1	Roland C. Lapp									9						9[a,b]		9
12N/8E-18L1	Roland C. Lapp				3											3		3
12N/8E-18Q1	Roland C. Lapp									6						6		6
12N/8E-18R1	Roland C. Lapp									8						8		8
Nevada Irrigation District		3	2	2,346	30		28	25	19	526	898	43	2	34		3,956	66	4,022
Pacific Gas and Electric Company		14	—	451	5	—	—	8	18	615	1,028	94	—	—	—	2,233	—	2,233
Total Auburn Ravine Subunit		17	10	3,141	80	0	28	33	37	1,253	1,961	165	2	34	0	[illegible]	102	6,893
								Bullards Bar Subunit										
18N/7E-3J1 18N/7E-3K1	Lloyd Williams Alex Moran				14											14		14
18N/8E-8P1	Erle Pauly				10											10	9	19
19N/7E-14H1	Mrs. Edna A. Whitehead							5								5		5
19N/8E-28N1	E. A. Nelson				16											16		16
19N/8E-31G1	Fred N. Baker			63												63		63
19N/8E-34B1	James and Frank Pendola				56											56		56
19N/8E-35J1	Julius A. Cassano				7											7		7
19N/9E-31K1	Ed J. Kohler			5												5		5
20N/8E-20R1	Soper-Wheeler Co.	—	—	5[d]	—	—	—	5[d]	—	—	—	—	—	—	—	14	—	14
Total Bullards Bar Subunit		0	0	77	103	0	0	10	0	0	0	0	0	0	0	190	9	199

For lettered footnotes, see last page of table.

TABLE 17 (Continued)

IRRIGATED LANDS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Pasture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
							Comp Beale Subunit											
Nevada Irrigation District					14											14		14
Ground water supply		44	—	35	—	—	—	—	—	—	—	—	—	—	—	79	—	79
Total Camp Beale Subunit		44	0	35	14	0	0	0	0	0	0	0	0	0	0	93	0	93
							Comp Far West Subunit											
14N/7E-28B1	Nannaman Ditch			61												61		61
14N/7E-33C1	Kenneth J. Casper			31												31		31
Nevada Irrigation District		17		1,402	56					35				7		517	5	1,522
Ground water supply		—	—	25	—	—	—	—	—	—	—	—	—	—	—	25	—	25
Total Camp Far West Subunit		17	0	1,519	56	0	0	0	0	35	0	0	0	7	0	1,634	5	1,639
							Combie Subunit											
14N/8E-32D1	E. H. and Callie J. Robbins			4												4		4
14N/8E-35C1	Edward and Margaret Pilliard			20												20		20
14N/8E-22P1 (Wolf Creek Subunit)	Daniel O. and M. W. Newton			13												13		13
14N/9E-4G1	Vernon S. and Edna Jaquith Barbara J. Haffey			8												8		8
15N/9E-21M1	C. J. Rolph, Jr.			9												9		9
Nevada Irrigation District				452	68			25		219	1	22				787		787
Pacific Gas and Electric Company		—	—	134	32	—	—	10	—	307	22	—	—	—	—	505	—	505
Total Combie Subunit		0	0	640	100	0	0	35	0	526	23	22	0	0	0	1,346	0	1,346
							Coon Creek Subunit											
12N/6E-2H1 (Auburn Ravine Subunit)	Adrian Guilliford	9		26												35		35
12N/7E-2C1	David W. Gooch									3						3		3
12N/7E-2Q1	Vincent H. Andsrson				2											2		2
12N/7E-3E1	Domingoe Ferreira			12							16					28		28

For lettered footnotes, see last page of table.

IRRIGATED LANDS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Pasture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
							Coon Creek Subunit (Continued)											
12N/7E-4G1	John G. Mohammed			37						21						58		58
12N/7E-12D1	Vincent H. Anderson									22		11				33		33
12N/7E-12H1	Joe L. Garcia									22						22		22
12N/8E-7F1	Manuel Jacinto			17						1						18[a]		18
12N/8E-7F2	Edward R. Forster			1						7						8		8
13N/6E-29H1	Chamberlein Estate Company		32	233												265		265
13N/6E-36H1	James Roes			15												15[a]		15
13N/7E-16Q1	C. S. Barton			13												13		13
13N/7E-19R1	Arthur B. Hopper										9					9		9
13N/7E-26J1	Take Hamasaki									6						6[a]		6
13N/7E-26N1	Leslie L., Sr. and Violet Moate										21					21		21
13N/7E-28K1	Frank C. McElroy			11												11		11
13N/7E-28L1	Douglas Newcomb			22												22		22
13N/7E-28L2	Douglas Newcomb			12												12		12
13N/7E-29B1	Edgar E. and Ina E. Pellet				2						4					6		6
13N/7E-29N1	Mrs. Desral Rahlman			10												10		10
13N/7E-30B1	Arthur B. Hopper										14					14		14
13N/7E-30G1	Arthur B. Hopper				10											10		10
13N/7E-30Q1	Herman L. Robbins			5												5		5
13N/7E-30Q2	Herman L. Robbins			4												4		4
13N/7E-30R1	Earl G. Calkins				12											12		12
13N/7E-31H1	Mrs. May Herold			36												36		36
13N/7E-32H1	Walter Allen				11											11[a]		11
13N/7E-32H2	Walter Allen				18											18		18
13N/7E-32K1	Walter Allen				4											4		4
13N/7E-32Q1	Peter J. Bagdanoff			8												8		8
13N/7E-33E1	Manuel A. Ferry, Jr.			5												5		5

For lettered footnotes, see last page of table.

TABLE 17 (Continued)

IRRIGATED LANDS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Posture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
							Coon Creek Subunit (Continued)											
13N/7E-33H1	John C. Bertoglio			48												48		48
13N/7E-34A1	I. R. and Mary Souza							7								7[a]		7
13N/7E-34G1	I. R. and Mary Souza				6											6[a]		6
13N/7E-34K1	Mrs. Julia Nunes										12					12		12
13N/7E-34P1	Mrs. Julia Nunes										13					13		13
13N/7E-35A1	Mrs. Mary G. Ferreira			23												23		23
13N/7E-36J1	Stanley J. and Betty R. Samson			25												25[a]		25
13N/8E-14A1	A. J. Marty				15											15		15
13N/8E-18F1	John Rainey			6												6		6
13N/8E-18F2	John Rainey			4												4		4
13N/8E-19C1	Harold E. Hubbard			31												31[a]		31
13N/8E-19H1	John Rainey			17												17		17
13N/8E-22E1	Ralph E. Enzler			9												9		9
13N/8E-26F1	Don L. and Lillian D. Castle			10												10		10
13N/8E-31D1	August Henriques			2						6						8[a]		8
13N/8E-34F1	James E. and Elsis W. Webb			6												6		6
13N/8E-34H1	Alvin W. Musso									26	14					40		40
Navada Irrigation District		160	54	6,853	46		34	18	5	804	1,299	207	8	60	6	9,554	58	9,612
Pacific Gas and Electric Company		—	—	116	10	—	—	—	15	292	42	—	—	—	—	475	—	475
Total Coon Creek Subunit		169	86	7,617	136	0	34	25	20	1,210	1,444	218	8	60	6	11,033	58	11,091
							Deer Creek Subunit											
16N/6E-24L1	Donald and Charles Staples				14											14		14
16N/7E-21N1	Roy Van Tiger				15											15		15
16N/7E-22N1	Roy Van Tiger			102												102[a]		102

For lettered footnotes, see last page of table.

IRRIGATED LANDS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Posture			Truck and berry crops	Orchard						Sub-tropical	Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous										
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
							Deer Creek Subunit (Continued)											
16N/7E-23N1	Malcolm R. Hill			15												15[a]		15
16N/7E-26N1	Albert J. Nightingale			9												9		9
16N/7E-29E1	J. C. Peacock			69												69		69
16N/7E-33C1	E. S. Hass			3												3		3
16N/7E-35C1	Carl Niesen			33								1				34[a]		34
16N/7E-35D1 16N/7E-35D2	Ralph J. and Loie Winslow																64	64
16N/8E-14C1	Leland H. Brown			16												16		16
16N/8E-20M1	Edwin A. Beutler			12												12		12
16N/8E-21G1	Clifford G. Thorson			13												13		13
16N/8E-22H1	John J. Loosar									10						10[a]		10
Nevada Irrigation District		—	5	1,449	431	9	7	41	—	165	—	6	—	—	3	2,116	3	2,119
Total Deer Creek Subunit		0	5	1,721	460	9	7	41	0	175	0	7	0	0	3	2,428	67	2,495
							Donner Pass Subunit											
							(No irrigated lands)											
							Dry Creek Subunit											
15N/7E-25H1	Clarence R. Black			26												26		26
15N/8E-30J1	Lowell L. Elster			5												5[a]		5
15N/8E-30K1	Lowell L. Elster			5												5[a]		5
Nevada Irrigation District		—	—	1,610	342	—	—	—	—	4	—	—	—	—	—	1,956	21	1,977
Total Dry Creek Subunit		0	0	1,646	342	0	0	0	0	4	0	0	0	0	0	1,992	21	2,013
							Dutch Flat Subunit											
16N/10E-36F1	Earl Smith				6											6		6
Pacific Gas and Electric Company		—	—	—	—	—	—	—	—	16	—	—	—	—	—	16	—	16
Total Dutch Flat Subunit		0	0	0	6	0	0	0	0	16	0	0	0	0	0	22	0	22

For lettered footnotes, see last page of table.

TABLE 17 (Continued)

IRRIGATED LANDS IN YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Pasture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
								French Corral Subunit										
16N/7E-3E1 16N/7E-4Q1	C. R. and G. W. Maish				61											61		61
16N/8E-4E1	Joy Hilliard			8												8		8
17N/7E-26F1	Louie F. Dudley				48[e]											48		48
17N/7E-33R1	C. R. and G. W. Maish			5												5[a]		5
17N/7E-33R2	C. R. and G. W. Maish			11												11[a]		11
17N/8E-1N1	Vincent Bellet				31			2								33		33
17N/8E-1P1 17N/8E-2J1	Vincent Bellet and Edward Bellet			50												50		50
17N/8E-2B1	James M. Selvester			15												15		15
17N/8E-2C1	Jamee M. Selvester			11												11		11
17N/8E-2F1	Jamee M. Selvester			9												9		9
17N/8E-9Q1	Bert L. Burda			5												5		5
17N/8E-15D1	Minona Mining Co.			53	69											122		122
17N/8E-15D2	Calvin Milhoue			14												14		14
17N/8E-16B1	Bert L. Burda			12												12		12
17N/8E-20G1	Frank S. Reader			7												7		7
17N/8E-20N1	Francie J. Reader			14												14		14
17N/9E-27K1	D. M. Loney			11								1				12		12
17N/9E-28N1	William L. Davies			25												25		25
17N/9E-34K1	Harry M. Davis			4			3	2								9		9
17N/9E-35E1	Arbogast Brothers			9												9		9
Nevada Irrigation District		---	1	610	150	---	18	22	---	10	---	---	5	---	---	816	---	816
Total French Corral Subunit		0	1	873	359	0	21	26	0	10	0	1	5	0	0	1,296	0	1,296
								French Dry Creek Subunit										
16N/5E-10B1	C. C. French S. I. Turnell			10												10		10
16N/5E-12C1	Neal W. Duckels			10												10		10

For lettered footnotes, see last page of table.

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Posture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
							French Dry Creek Subunit (Continued)											
16N/5E-12G1	Neal W. Duckele			1												1		1
16N/6E-7L1	Henry P. Smith			177												177		177
16N/7E-4E1 16N/7E-5H1	Howard C. and L. E. Richardson				11											11		11
17N/5E-27R1	Burris, Burris, Burrie, and Hoxworth			16												16		16
17N/5E-34K1	James M. Stevens			14												14[c]		14
17N/6E-11E1	Salvador S. Callejo			27												27		27
18N/6E-24M1	Arthur J. Paquette																16	16
18N/6E-34Q2	Clint Givens			20												20		20
18N/6E-36B1	J. W. Treeler			6												6		6
19N/6E-25D1	Leslie W. Sille			4												4		4
19N/6E-35M1	Harry Howard				17											17		17
19N/7E-18E1	Martin Costa																33	33
Browns Valley Irrigation District				1,529		33								91		1,653		1,653
Nevada Irrigation District		—	—	16	423	—	—	—	—	—	—	—	—	97	—	536	—	536
Total French Dry Creek Subunit		0	0	1,830	451	33	0	0	0	0	0	0	0	188	0	2,502	49	2,551
							Goodyears Bar Subunit											
20N/10E-32L1	Joseph P. Bachele			5												5		5
20N/10E-33A1	Axel Nasholm	—	—	—	—	—	—	4	—	—	—	—	—	—	—	4	—	4
Total Goodyears Bar Subunit		0	0	5	0	0	0	4	0	0	0	0	0	0	0	9	0	9
							Greenhorn Creek Subunit											
15N/9E-10C1 15N/9E-10G1	A. P. Gelhaus			17												17		17
16N/9E-29M1	Elmo C. Cox			8												8		8
16N/9E-32D1	Andrew Ueland			10												10		10
16N/9E-32M1	Miss Lucy Walles				11											11		11

For lettered footnotes, see last page of table.

TABLE 17 (Continued)

IRRIGATED LANDS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Pasture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
								Greenhorn Creek Subunit (Continued)										
Nevada Irrigation District		4	—	71	59	2	8	24	—	52	—	2	—	—	—	222	—	222
Total Greenhorn Creek Subunit		4	0	106	70	2	8	24	0	52	0	2	0	0	0	268	0	268
								Laporte Subunit										
20N/9E-18F1 20N/9E-18M1	Forest Sheehan	—	—	—	17	—	—	—	—	—	—	—	—	—	—	17	—	17
Total La Porte Subunit		0	0	0	17	0	0	0	0	0	0	0	0	0	0	17	0	17
								Orchard and Pleasant Grove Creeks Subunit										
12N/6E-13A1 (Auburn Ravine Subunit)	Hemphill Ditch			189	37											226	79	305
12N/7E-19F1	Tom E. Allen			11												11		11
Pacific Gas and Electric Company		—	—	22	8	—	—	—	—	—	—	—	6	—	—	36	—	36
Total Orchard-Pleasan Grove Creeks Subunit		0	0	222	45	0	0	0	0	0	0	0	6	0	0	273	79	352
								Pike Subunit										
17N/8E-2M1	Roy D. and Geraldine Childers, et al.				11											11		11
17N/8E-3A1	Roy D. and Geraldine Childers, et al.			13												13		13
17N/8E-4N1	Lorin N. Trubechenck			35												35		35
17N/8E-4R1	E. L. Dow	2														2		2
17N/8E-6R1	M. Kehn			5												5		5
17N/8E-15D1 (French Corral Subunit)	Minona Mining Co.				3											3		3
18N/8E-15A1	Cunningham Ditch			26												26		26
18N/8E-15R1	George Butz			30												30		30
18N/8E-20Q1	Francis J. and Ruth Bartsch	5														5		5

For lettered footnotes, see last page of table.

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Pasture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
								Pike Subunit (Continued)										
18N/9E-8M1	Wesley B. Parker						1	23								24		24
Browns Valley Irrigation District		—	—	—	9	—	—	—	—	—	—	—	—	—	—	9	—	9
Total Pike Subunit		7	0	109	23	0	1	23	0	0	0	0	0	0	0	163	0	163
								Rocklin Subunit										
11N/6E-25G1	George Mavrias			10												10		10
11N/7E-1C1	Gordon Glenn M. A. Harrie			25												25		25
11N/7E-2A1	M. A. Harris			13												13		13
11N/7E-5R1	George F. and Dixie M. Meredith			26												26		26
11N/7E-8G1	George C. Roeding, Jr.																7	7
11N/7E-10M1	Frank W. and Ora I. Croseley			8												8		8
11N/7E-10P1	R. E. and Ruby Horton						3									3		3
11N/7E-11C1 11N/7E-11C2	John E. Boyington			18												18[b]		18
11N/7E-12C1	June I. Maxwell Joseph and Gladys Kholes			34												34		34
11N/7E-15B1	David M. Takagishi															4[b]		4
11N/7E-15D1	Cecil and Soledad A. Black			3												3		3
11N/7E-16H1	F. Comria			6												6		6
11N/7E-16H2	Noah and Gracie Morris			9												9		9
11N/7E-17C1	Antonio and Francss Montero	11														11		11
11N/7E-17M1	Ralph B. and Julia H. Aitkan			56												56[b]		56
11N/7E-17P1	Susie I. and W. F. Ross	8		19												27		27
11N/7E-19R1	Guy Schoonderwoerd			12												12		12

For lettered footnotes, see last page of table.

TABLE 17 (Continued)

IRRIGATED LANDS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Pasture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
							Rocklin Subunit (Continued)											
11N/7E-20G1	Joe Boisa			22												22		22
11N/7E-20J1	I. C. Lewis and L. E. Wyatt			28												28		28
11N/7E-20P1	Ruben J. Ruhkala			9												9		9
11N/7E-20P2	George L. and Marion E. Robson			5												5		5
11N/7E-20P3	Gordon I. and Beth L. Gulbranson			12												12		12
11N/7E-27L1	Edward J., Boy, and K. Brown			33												33		33
11N/7E-27M1	Myron J. and Mona J. Stephens			11												11		11
11N/7E-34H1	Harold E. Wentsch Thomas J. Kelley			23												23		23
11N/8E-6H1	Basil T. Rogers			4												4[b]		4
11N/8E-6Q1	Mrs. Martha A. Brennan										10					10[b]		10
11N/8E-7B1	Mrs. Alice Day									10						10[b]		10
11N/8E-7N1	Frank Poirier								17							17		17
11N/8E-18B1	Dwight Brown	6		33												39		39
12N/8E-29N1	James S. McAdoo			14												14		14
12N/7E-32N1	Ervan E. Draper John H. Carr			6												6		6
12N/7E-33E1	Arthur L. Traylor			19												19		19
12N/7E-36E1	Theodore M. Navas			11												11		11
12N/7E-36M1	Brian B. and Emma Mae Hughes			8												8		8
12N/7E-36N1	John A. Patton			6												6		6
Pacific Gas and Electric Company		65	42	1,488	62	0	56	28	207	1,784	4,064	2,549	5	138	29	10,517	106	10,623
Total Rocklin Subunit		90	42	1,971	62	0	59	28	224	1,798	4,074	2,549	5	138	29	11,069	113	11,182

For lettered footnotes, see last page of table.

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Pasture			Truck and berry crops	Orchard						Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous					Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts				
								Sierra City Subunit									
20N/11E-25D1	Edward J. Fournier				18										18		18
20N/12E-22R1	Albert Anderson	—	—	—	15	—	—	—	—	—	—	—	—	—	15	—	15
Total Sierra City Subunit		0	0	0	33	0	0	0	0	0	0	0	0	0	33	0	33
								Washington Subunit									
18N/10E-29P1	Mason J. Meredith			23											23		23
18N/10E-31P1	Cordelia Coombes	—	—	—	7[d]	—	—	—	—	—	—	—	—	—	7	—	7
Total Washington Subunit		0	0	23	7	0	0	0	0	0	0	0	0	0	30	0	30
								Wolf Creek Subunit									
14N/8E-5J1	J. M. Walkenhorst, Jr.															5	5
14N/8E-5J2	C. R. and M. L. Milham			13											13		13
14N/8E-9L1	Ted C. Buck			178											178		178
14N/8E-17L1	C. N. and Bernice G. Robinson			5											5		5
14N/8E-20G1	Carl C. Wallam			4											4		4
14N/8E-20K1	Dennie and Murial Jones			14	3										17[a]		17
14N/8E-20R1	Murray and Edith E. Young			1	2										3		3
14N/8E-21R1	P. T. Clay			4											4[a]		4
14N/8E-22P1	Daniel O. and M. W. Newton			42											42[a]		42
15N/8E-3E1	George and Charles Smith			18											18		18
15N/8E-12P1	Mrs. Katie M. Whaeler									12					12[a]		12
15N/8E-13F1	G. W. Brewer			13											13[a]		13
15N/8E-14J1	J. N. Ball			20											20		20
15N/8E-15M1	N. O. Pingrea			12											12		12

For lettered footnotes, see last page of table.

TABLE 17 (Continued)

IRRIGATED LANDS IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT, 1957

(In acres)

Location number	Diversion name or owner	Grain and hay crops	Field crops	Pasture			Truck and berry crops	Orchard							Vineyard	Total lands irrigated	Idle or fallow	Total
								Deciduous						Sub-tropical				
				Mixed	Native	Meadow		Apples	Peaches	Pears	Plums	Mixed and misc. fruits	Misc. nuts					
							Wolf Creek Subunit (Continued)											
15N/8E-22E1	D. M. Mefford			19												19		19
15N/8E-22L1	Leo Flury			5												5		5
15N/8E-22M1	J. W. Stevenson			142												142[a]		142
15N/8E-22P1	Leo Flury			6												6		6
15N/8E-22R1	Yale H. Jordan			4												4		4
15N/8E-23N1	Victor Garofalo			43												43[a]		43
15N/8E-27C1	D. M. Mefford			7												7		7
15N/8E-28A1	Andrew M. Harvey			79												79		79
15N/9E-17M1	Charles A. Morandi			7												7		7
15N/9E-18P1	Charles A. Morandi			19												19		19
15N/9E-18R1	Antone Rondoni			5												5		5
16N/8E-24K1	Malcolm Hammill			54												54		54
16N/8E-26G1	Manuel Gallino			8	4											12		12
16N/8E-26P1	Newmont Mining Co.			4	7											11		11
16N/8E-26R1	Newmont Mining Co.			9	5											14		14
Nevada Irrigation District		---	---	1,113	433	---	---	69	---	226	10	6	7	---	---	1,864	21	1,885
Total Wolf Creek Subunit		0	0	1,848	454	0	0	69	0	238	10	6	7	0	0	2,632	26	2,658
TOTAL YUBA-BEAR RIVERS HYDROGRAPHIC UNIT		348	144	23,433	2,798	107	158	318	281	5,317	7,512	2,970	33	427	38	43,884	529	44,413

a. Received supplemental purchased water from Nevada Irrigation District.
b. Received supplemental purchased water from Pacific Gas and Electric Company.
c. Received supplemental purchased water from Browns Valley Irrigation District.
d. Received partial irrigation.
e. 40 acres received partial irrigation.

CHAPTER IV. LAND CLASSIFICATION

Calculations of future water requirements will be based in a large part on a classification of lands with regard to their potential for irrigated agricultural and recreational development. The results of a land classification survey conducted to determine this potential in the Yuba-Bear Rivers Hydrographic Unit are presented in this chapter.

Lands were not classified in this survey with respect to their potential for urban development. The use of lands for urban purposes is closely related to population at any given time, and it is planned to defer designation of these lands until estimates of population and related economic studies are made in connection with determination of future water requirements.

The former Division of Water Resources made a reconnaissance classification of lands of the State which was reported in State Water Resources Board Bulletin No. 2, "Water Utilization and Requirements of California," dated June 1955. A similar reconnaissance classification, but with more detail, was also reported in the Division of Water Resources Bulletin No. 56, "Survey of Mountainous Areas," dated December 1955, and the former Water Resources Board's Bulletin No. 10, "Placer County Investigation," dated June 1955. Bulletin No. 10 entailed only that portion of the Yuba-Bear Rivers Hydrographic Unit in Placer County. A still more detailed Land classification survey was reported in Department of Water Resources

Bulletin No. 58, "Northeastern Counties Investigation," dated June 1960, covering that portion of the Yuba-Bear Rivers Hydrographic Unit in Yuba, Plumas, Butte, and Sierra Counties. The present investigation uses the same basic land classification standards which were used in Bulletin No. 58. However, additional classes of recreational lands have been included, along with some minor modifications to the irrigable agricultural land standards. In Yuba Plumas, Butte, and Sierra Counties, where the land classification survey was already completed for Bulletin No. 58, the basic classification reported therein was modified to meet the standards for this investigatio along with a remapping of the present urban lands.

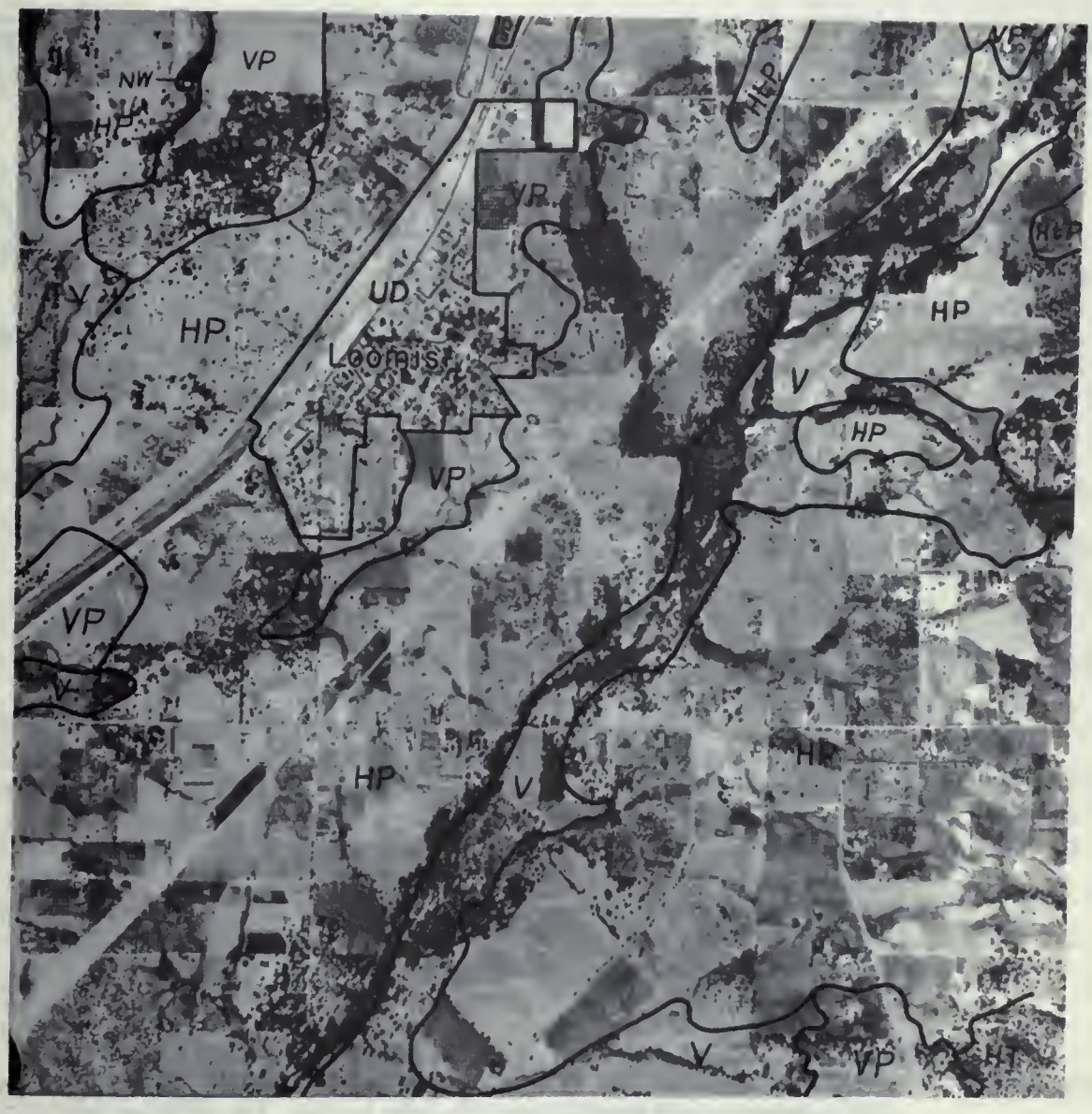
The lands within Beale Air Force Base were classified as to their potential for irrigated agriculture, regardless of their present military status.

Results of the land classification survey are shown on sheets 1 through 23 of Plate 3, "Classification of Lands," The totals of areas in each classification are shown in Table 19

Methods and Procedures

The general methods and procedures used in field mapping and tabulation of information were essentially the same as those described for the land use survey in Chapter III. An example of land classification delineations on an aerial photograph is shown on page 163.

The standards used in the classification of lands are given in detail in Table 18.



Example of Land Classification Delineated on Aerial Photograph
(See page 164 for symbol explanation)

TABLE 18

LAND CLASSIFICATION STANDARDS

Land class: symbols :	Characteristics
	Irrigable Lands
V -	These lands are level or slightly sloping and vary from smooth to hummocky or gently undulating relief. The maximum allowable slope is 6 percent for smooth, reasonably large-sized bodies lying in the same plane. As the relief increases and becomes more complex, lesser slopes are limiting. The soils have medium to deep effective root zones, are permeable throughout, and free of salinity, alkalinity, rock, or other conditions limiting crop adaptability of the land. These lands are suitable for all climatically adapted crops.
H -	These are lands with greater slope and/or relief than those of the V class. They vary from smooth to moderately rolling or undulating relief. The maximum allowable slope is 20 percent for smooth, reasonably large-sized bodies lying in the same plane. As the relief increases and becomes more complex, lesser slopes are limiting. The soils are permeable, with medium to deep effective root zones, and are suitable for the production of all climatically adapted crops. The only limitation is that imposed by topographic conditions.
M -	These are lands with greater slope and/or relief than those of the H Class. They vary from smooth to steeply rolling or undulating relief. The maximum allowable slope is 30 percent for smooth, reasonably large-sized bodies lying in the same plane. As the relief increases and becomes more complex, lesser slopes are limiting. The soils are permeable, with medium to deep effective root zones, and are suitable for the production of all climatically adapted crops. The only limitation is that imposed by topographic conditions.

Any variation in the foregoing, as defined, is indicated by use of one or more of the following symbols:

W - Indicates the presence of a high water table, which in effect limits the present crop adaptability of these lands to pasture crops. Drainage and a change in irrigation practice would be required to affect the crop adaptability.

TABLE 18 (Continued)

LAND CLASSIFICATION STANDARDS

Land class: symbol :	Characteristics
s -	Indicates the presence of an excess of soluble salts or exchangeable sodium in slight amounts, which limits the present adaptability of these lands to crops tolerant to such conditions. The presence of salts within the soil generally indicates poor drainage and a medium to high water table. Reclamation of these lands will involve drainage and the application of small amounts of amendments and some additional water over and above crop requirements in order to leach out the harmful salts.
ss -	Indicates the presence of an excess of soluble salts or exchangeable sodium in sufficient quantity to require the application of moderate amounts of amendments and some additional water over and above crop requirements in order to effect reclamation.
h -	Indicates very heavy textures, which make these lands best suited for production of shallow-rooted crops.
l -	Indicates fairly coarse textures and low moisture-holding capacities, which in general make these lands unsuited for the production of shallow-rooted crops because of the frequency of irrigations required to supply the water needs of such crops.
p -	Indicates shallow depth of the effective root zone, which limits use of these lands to shallow-rooted crops.
r -	Indicates the presence of rock on the surface or within the plow zone in sufficient quantity to prevent use of the land for cultivated crops.
	Urban Lands
UD -	The total area of cities, towns, and small communities presently used for residential, commercial, recreational and industrial purposes.
	Recreational Lands
RR -	Existing and potential permanent and summer home tracts within a primarily recreational area. The estimated number of houses, under conditions of full development, is indicated by a number in the symbol, i.e., RR-3 is suitable for three houses per acre.

TABLE 18 (Continued)

LAND CLASSIFICATION STANDARDS

Land class: symbols :	Characteristics
RC -	Existing and potential commercial areas which occur within a primarily recreational area and which inclu motels, resorts, hotels, stores, etc.
RT -	Existing and potential camp and trailer sites within a primarily recreational area
PP -	Existing county, state, federal, and private parks, race tracks, and fairgrounds.
	Miscellaneous Lands
F -	Presently forested lands, or lands subject to forest management, which meet the requirements for irrigable land but which, because of climatic conditions and physiographic position, are better suited for timber production or some type of forest management program rather than for irrigated agriculture.
Vm -	Swamps and marshlands which are covered by water most of the time and usually support a heavy growth of phreatophytes.
N -	Includes all lands which fail to meet the requirement of the above classes.

Major Categories of Land Classes

As indicated in Table 18 the lands mapped have been grouped into four major categories: irrigable lands, urban lands recreational lands, and miscellaneous lands. Additional notes with respect to the survey of lands in 1957 are set forth in the following paragraphs.

Recreation on Lake Van Norden near Soda Springs

Boating on Lake Vera near Nevada City

Irrigable Lands

Irrigable lands are grouped in appropriate classifications according to their suitability for development under irrigated agriculture and their crop adaptability. Presently irrigated lands are included within these classifications, but urban lands and recreational lands are not classed as to irrigability. In the survey the time element with respect to when the lands might be developed did not enter the determination of class, except that suitability for irrigated agriculture was necessarily considered in light of present agricultural technolo

There are many factors which influence the suitability of land for irrigation development. Since soil characteristics and the physiography of the landscape are the most stable of these factors, they were the only ones considered in the survey in classifying lands to their irrigability. The characteristics of the soil were established by examination of road cuts, ditch-banks, and the material from test holes, together with observations of the type and density of native vegetation and crops. Representative slopes throughout the area were measured with a clinometer. Other aspects, such as those economic factors related to the production and marketing of climatically adapted crops, the location of lands with respect to a water supply, and climatic conditions, were not considered in the basic classification. These latter factors are very important in estimating the nature of future cropping patterns and practices, and will be given due consideration when estimates are made of future water requirements.

Urban Lands

It is recognized that future urban expansion will encroach upon some of the irrigable lands. The location and extent of this type of development is a function of many variables. Because this land classification survey is an inventory of relatively unchanging physical conditions, no attempt was made to locate the areas of urban encroachment. Therefore, only those lands devoted to urban uses in 1957 are designated as "urban" lands.

Recreational Lands

Present trends indicate an expanding rate of use and demand for recreational facilities throughout the State. In view of these trends and the ever-increasing population, it is recognized that there will be a demand for substantial land areas for recreational purposes. This is particularly true of the mountainous regions where this type of development is expanding rather rapidly at the present time.

Generally speaking, all mountainous lands are suitable for some recreational use such as hunting, fishing, and similar outdoor activities. However, for purposes of this survey, lands classified for recreational use were limited to those which are now or in the future are expected to be used intensively for permanent and summer home tracts, commercial recreational areas, camp and trailer sites, and parks outside of urban areas. These are lands requiring intensive water service.

Primary considerations for classification of home tracts and camp and trailer sites were such physical factors as soil depth, slope, and rockiness; such aesthetic values as view, nearness to lakes, streams or seashore, or density and type of forest canopy suitable for the respective uses; and the plans of United States and California forest officials. An important factor in location of camp and trailer sites is the availability of a water supply, but isolation from existing roads did not influence site selection.

Miscellaneous Lands

Three types of lands are included as miscellaneous lands. These are: (1) irrigable forest management lands, (2) swamps and marshlands, and (3) other lands.

Irrigable forest management lands are those forested lands, rangelands, or lands subject to some type of forest management which have physical conditions making them susceptible to irrigation development but which, because of climatic conditions and physiographic position, are better suited for and are expected to remain under, their present uses.

Swamps and marshlands are those lands which generally have water standing on them and usually support a heavy growth of tules or other phreatophytes.

Approximately 801,000 acres, or 64 percent of the area of the hydrographic unit, are other lands, which failed to meet the requirements for the irrigable, urban, recreation, irrigable forest management, or swamp and marsh classification.

TABLE 19
CLASSIFICATION OF LANDS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
(In acres)

Subunit	Irrigable agricultural lands											Present urbon lands 1957	Recreational lands				Miscellaneous	
	Smooth lying			Gently sloping				Steeply sloping				Total							
	V	Vp	Vw	H	Hp	Hr	Hpr	M	Mp	Mr	Mpr			RC	RR	RT	Total	F	Vm
Alleghany																			
Nevada County			400	40		20						460	20		0	150	150	13,710	
Sierra County			420	0		0						420	50		300	90	390	4,050	
Total	0	0	820	40	0	20	0	0	0	0	0	880	70	0	300	240	540	17,760	0
Auburn Ravine																			
Placer County	640	1,980	30	530	7,860	70	580	290	6,170	0	290	18,440	1,600	0	0	0	0	0	10
Bullards Bar																			
Butte County			0	0				0				0	0	0	0	0	0	200	
Sierra County			0	10				10				20	0	0	60	0	60	600	
Yuba County			20	290				700				1,010	60	10	1,600	140	1,750	9,960	
Total	0	0	20	300	0	0	0	710	0	0	0	1,030	60	10	1,660	140	1,810	10,760	0
Camp Beale																			
Yuba County	1,240	8,860	0	20	11,300	0	1,030	0	1,290	0	1,000	24,740	0	0	0	0	0	0	0
Camp Far West																			
Nevada County	40	30	20	230	3,500		1,400	20	3,900	20	2,340	11,500							
Placer County	80	340	0	50	4,810		630	0	2,930	0	1,830	10,670							
Yuba County	0	0	0	0	550		170	0	1,520	0	800	3,040							
Total	120	370	20	280	8,860	0	2,200	20	8,350	20	4,970	25,210	0	0	0	0	0	0	0
Combie																			
Nevada County	100	120	60	730	2,610		350	1,350	2,680	10	360	8,370	20	0			0	0	
Placer County	250	0	0	1,560	540		120	6,610	470	40	750	10,340	150	50			50	110	
Total	350	120	60	2,290	3,150	0	470	7,960	3,150	50	1,110	18,710	170	50	0	0	50	110	0
Coon Creek																			
Placer County	2,140	4,680	0	2,520	16,310	30	1,790	2,560	12,460	0	3,280	45,770	580	20	0	0	20	0	30
Deer Creek																			
Nevada County	820	90	30	3,130	3,390	130	1,350	4,550	4,790	20	2,210	20,510	1,260	70	80	90	240	7,710	20
Yuba County	0	0	0	0	0	0	0	0	0	0	20	20	0	0	0	0	c	0	0
Total	820	90	30	3,130	3,390	130	1,350	4,550	4,790	20	2,230	20,530	1,260	70	80	90	240	7,710	20
Donner Pass																			
Nevada County			1,460									1,460		230	1,260	1,050	2,540	15,250	
Placer County			170									170		220	730	390	1,340	440	
Total	0	0	1,630	0	0	0	0	0	0	0	0	1,630	0	450	1,990	1,440	3,880	15,690	0
Dry Creek																			
Nevada County	490	20	10	1,680	6,270	10	2,160	280	6,850		1,870	19,640							
Yuba County	760	0	0	100	7,350	40	1,280	0	2,980		1,610	14,120							
Total	1,250	20	10	1,780	13,620	50	3,440	280	9,830	0	3,480	33,760	0	0	0	0	0	0	0
Dutch Flat																			
Nevada County			160	40				110				310	0	0	180	40	220	5,070	
Placer County			150	270				170				590	140	40	1,940	110	2,090	1,350	
Total	0	0	310	310	0	0	0	280	0	0	0	900	140	40	2,120	150	2,310	6,420	0
French Corral																			
Nevada County	100	0	80	3,370	540	20	680	6,930	1,600	40	950	14,310	50	20	0	20	40	2,540	0

TABLE 19 (Continued)
CLASSIFICATION OF LANDS
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
(In acres)

Subunit	Irrigable agricultural lands											Total	Present urban lands 1957	Recreational lands				Miscellaneous	
	Smooth lying			Gently sloping				Steeply sloping											
	V	Vp	Vw	H	Hp	Hr	Hpr	M	Mp	Mr	Mpr			RC	RR	RT	Total	F	Vm
French Dry Creek																			
Butte County	0	0	0	0	0	0	0	0	0	0	0	0	0		0		0	750	
Nevada County	20	0	0	70	680	60	170	0	550	0	390	1,940	0		0		0	0	
Yuba County	700	70	480	2,130	6,410	2,580	1,560	2,540	8,940	1,610	2,480	29,500	290		490		490	7,410	
Total	720	70	480	2,200	7,090	2,640	1,730	2,540	9,490	1,610	2,870	31,440	290	0	490	0	490	8,160	0
Goodyears Bar																			
Sierra County			280	40	10			80				410	170	70	460	220	750	2,820	
Yuba County			0	0	0			0				0	0	0	0	0	0	170	
Total	0	0	280	40	10	0	0	80	0	0	0	410	170	70	460	220	750	2,990	0
Greenhorn Creek																			
Nevada County	30	0	90	1,420	0	10	0	3,530	550	10	0	5,640	20	0	0	0	0	4,320	0
La Porte																			
Plumas County			0	20				40				60	60		280	20	300	610	
Sierra County			30	30				0				60	0		140	30	170	2,930	
Yuba County			10	10				0				20	0		0	0	0	1,230	
Total	0	0	40	60	0	0	0	40	0	0	0	140	60	0	420	50	470	4,770	0
Orchard-Pleasant Grove Creeks																			
Placer County	330	1,310	10	0	3,500	0	190	0	80	0	0	5,420	560	0	0	0	0	0	10
Pike																			
Nevada County	50		30	590	0	10	120	1,560	570	10	140	3,080	110	0	0	0	0	2,450	
Sierra County	0		20	70	0	0	0	130	0	0	0	220	0	0	210	20	230	5,940	
Yuba County	10		20	890	60	240	330	880	80	290	240	3,040	80	30	610	80	720	2,120	
Total	60	0	70	1,550	60	250	450	2,570	650	300	380	6,340	190	30	820	100	950	10,510	0
Rocklin																			
Placer County	2,050	1,460	20	3,770	15,480	750	1,570	400	3,800	100	640	30,040	890	0	0	0	0	0	20
Sierra City																			
Sierra County	0	0	1,270	20	0	20	0	100	0	0	0	1,410	50	120	1,530	1,110	2,760	3,190	0
Washington																			
Nevada County	10	0	60	590	0	0	0	460	0	0	0	1,120	150	0	80	30	110	18,170	0
Wolf Creek																			
Nevada County	680	20	30	5,750	2,320	140	840	9,170	6,250	310	1,580	27,090	1,710	0	0	0	0	30	0
BUTTE COUNTY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	950	0
NEVADA COUNTY	2,340	280	2,430	17,640	19,310	400	7,070	27,960	27,740	420	9,840	115,430	3,340	320	1,600	1,380	3,300	69,250	20
PLACER COUNTY	5,490	9,770	380	8,700	48,500	850	4,880	10,030	25,910	140	6,790	121,440	3,920	330	2,670	500	3,500	1,900	70
PLUMAS COUNTY	0	0	0	20	0	0	0	40	0	0	0	60	60	0	280	20	300	610	0
SIERRA COUNTY	0	0	2,020	170	10	20	0	320	0	0	0	2,540	270	190	2,700	1,470	4,360	19,530	0
YUBA COUNTY	2,710	8,930	530	3,440	25,670	2,860	4,370	4,120	14,810	1,900	6,150	75,490	430	40	2,700	220	2,960	20,890	0
TOTAL	10,540	18,980	5,360	29,970	93,490	4,130	16,320	42,470	68,460	2,460	22,780	314,960	8,020	880	9,950	3,590	14,420	113,130	90

CHAPTER V. SUMMARY

The Yuba-Bear Rivers Hydrographic Unit comprises the 1,955-square-mile (1,251,120 acres) drainage area of the Yuba and Bear Rivers and minor streams draining the foothills between the Yuba River and the American River above the Sacramento Valley floor. Most of the terrain in the unit is mountainous, but valley and foothill lands constitute about 40 percent of the total area. Agriculture is the largest single commercial enterprise in the unit. Approximately one-tenth of the lands presently devoted to agriculture are dry-farmed; nine-tenths are irrigated. Major irrigated crops are pasture and deciduous orchard. Lumbering, recreation, and hydroelectric power development are also important local activities. The largest communities in the area are Auburn, Grass Valley, and Nevada City.

Water Use

A survey was made of water uses supplied by diversion of surface water during 1957 and 1958, the object of which was to locate and obtain data with respect to all diversions of more than 10 acre-feet per year.

Continuous or periodic measurements were made on approximately 45 percent of the 374 diversions located during the year of survey. Twelve significant hydroelectric powerplants are located in the unit, but most of the diversions (275) are used for irrigation purposes. The largest diverters of water in the unit are Pacific Gas and Electric Company and Nevada Irrigation District.

The basis of water right for each diversion was determined insofar as possible. Most of the diversions are based on appropriative rights, many of which were established prior to the enactment of the Water Commission Act (1914), and are not of record, since such rights could be established simply by actual diversion and use of water. Generally, there are no official records of the riparian rights.

The Water Commission Act, now codified in Divisions 1 and 2 of the Water Code, requires formal application for the appropriation of water. As of May 29, 1959, a total of 470 currently valid applications had been made under provisions of the act in the Yuba-Bear Rivers Hydrographic Unit. Permits or licenses had been granted for 392 of these applications. Fifty-two of these applications were pending with the board, and 26 were incomplete.

Land Use

A detailed land use survey was conducted in the Yuba-Bear Rivers Hydrographic Unit during 1957. The areas of land devoted to present uses are summarized below and portrayed pictorially in Figure 1.

Use	Area, in acres	
Agricultural lands		
Lands irrigated in 1958	43,880	
Lands normally irrigated but idle or fallow in 1957	530	
Meadowlands	5,260	
Dry-farmed lands	4,900	
Total agriculture		54,660
Recreational lands		1,540
Urban lands		8,020
Native vegetation and marshlands		1,186,990
Total area of unit		1,251,120

Of the 43,880 acres of land irrigated, 43,780 were irrigated with surface water and 100 with ground water.

Land Classification

A detailed agricultural and recreational land classification survey was conducted in the unit in 1957. In Nevada and Placer Counties a complete new survey was conducted, while in Butte, Plumas, Sierra, and Yuba Counties the agricultural land class reported in Bulletin No. 58 was utilized with some minor modifications. Results of the survey are summarized below and presented pictorially in Figure 2.

Classification	Area, in acres
Irrigable agricultural lands	314,320
Present urban lands	8,020
Recreational lands	14,420
Miscellaneous lands	
Irrigable forest management lands	113,130
Other lands (including swamps and marshlands)	801,230
Total area of unit	1,251,120

About 92 percent of the irrigable agricultural lands are located in the Auburn Ravine, Camp Beale, Camp Far West, Combie, Coon Creek, Deer Creek, Dry Creek, French Corral, French Dry Creek, Rocklin, and Wolf Creek Subunits. Approximately 97 percent of the recreational lands are located in the higher mountainous areas of the Alleghany, Bullards Bar, Donner Pass, Dutch Flat, French Dry Creek, Goodyears Bar, La Porte, Pike, and Sierra City Subunits. The majority of the irrigable forest management lands are located in the Alleghany, Bullards Bar, Deer Creek, Donner Pass, Dutch Flat, French Dry Creek, Greenhorn Creek, Pike, and Washington Subunits.

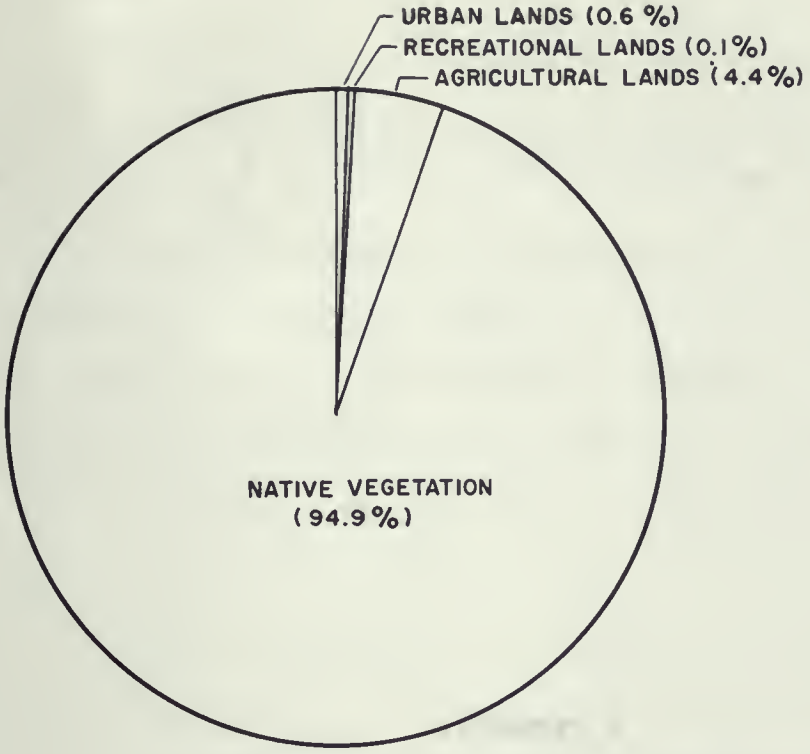


Figure 1

1957 LAND USE

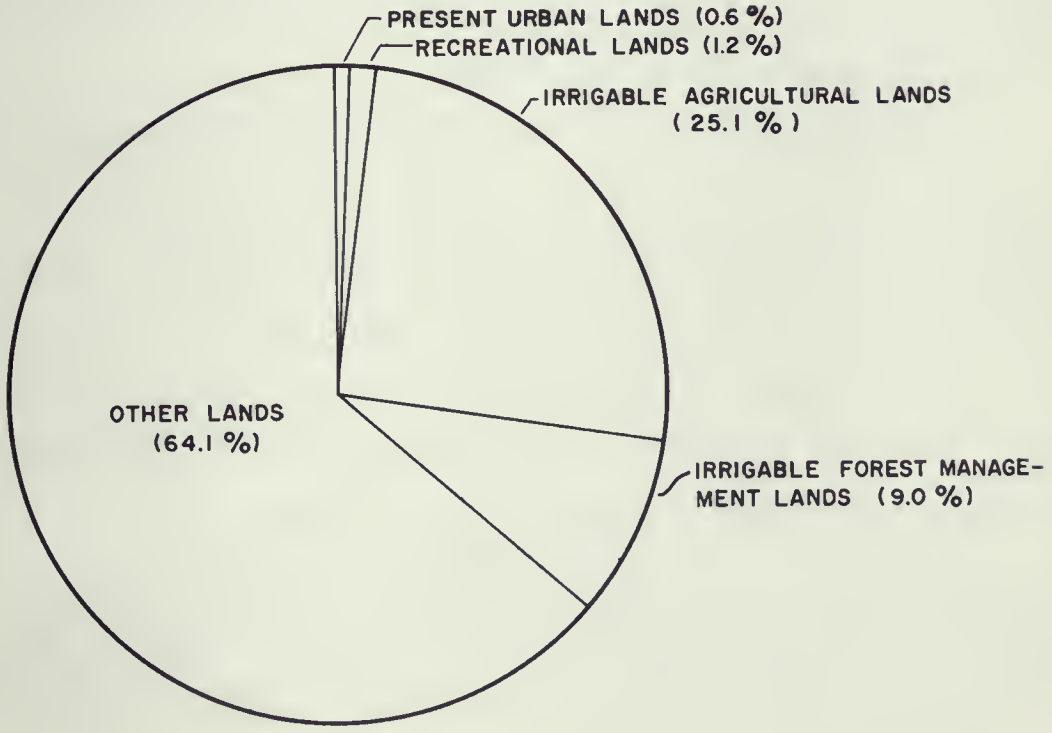


Figure 2

CLASSIFICATION OF LANDS

APPENDIX A

STATEWIDE WATER RESOURCES AND WATER REQUIREMENTS PROGRAM

APPENDIX A

STATEWIDE WATER RESOURCES AND WATER REQUIREMENTS PROGRAM

California's major water problem today is that of development and delivery of supplemental water supplies to meet increasing water requirements throughout the State. The problem involves (1) the regulation of seasonal and cyclic fluctuation of streamflow to meet demand schedules in the areas of origin, and (2) the transmission of regulated surplus flows over long distances to areas of deficiency. The development and long-distance transfer of water is currently accomplished by such major facilities as the federal Central Valley Project and the Colorado River Aqueduct of The Metropolitan Water District of Southern California. However, such development and transfer will be considerably broadened in scope by the State Water Facilities.

Consumptive water requirements of the State on a basin-wide basis were estimated in State Water Resources Board Bulletin No. 2, "Water Utilization and Requirements of California," June 1955. However, to provide for local water needs while considering specific export projects, more detailed information must be made available on present and projected future water requirements of the areas in which the projects are to be built. This has necessitated the considerably more detailed collection and analysis of data on hydrology, land use and land capability, and economics.

Recognizing that additional information is needed if the water needs of areas of origin are to be adequately protected in large-scale water development projects, the 1956 Legislature authorized an investigation to determine the water resources and water requirements of the respective watersheds in the State. The authorization is contained in Chapter 61, Statutes of 1956, as amended by Chapter 2025, Statutes of 1959. This legislation is codified in Section 232 of the Water Code as follows:

"232. The Legislature finds and declares that in providing for the full development and utilization of the water resources of this State it is necessary to obtain for consideration by the Legislature and the people, information as to the water which can be made available for exportation from the watersheds in which it originates without depriving those watersheds of water necessary for beneficial uses therein. To this end, the department is authorized and directed to conduct investigations and hearings and to prepare findings therefrom and to report thereon to the Legislature at the earliest possible date with respect to the following matters:

(a) The boundaries of the respective watersheds of the State and the quantities of water originating therein;

(b) The quantities of water reasonably required for ultimate beneficial use in the respective watersheds;

(c) The quantities of water, if any, available for export from the respective watersheds;

(d) The areas which can be served by the water available for export from each watershed; and

(e) The present use of water within each watershed together with the apparent claim of water right attaching thereto, excluding individual uses of water involving diversions of small quantities which, in the judgment of the Director of Water Resources, are insufficient in the aggregate to materially affect the quantitative determinations included in the report.

"Before adopting any findings which are reported to the Legislature, the department shall hold public hearings after reasonable notice, at which all interested persons may be heard."

For purposes of this investigation, the State has been divided into major hydrographic areas. These areas, in turn, have been subdivided into hydrographic units generally comprising watersheds of individual rivers. These watersheds are being field surveyed in some detail, and, where previous detailed studies have been made, the information will be brought up to date. Water resources and water requirements will be determined and reported in a bulletin for each of the hydrographic areas. Since it requires many years to gather sufficient data to make adequate analyses of water resources and water requirements, and, in order to make the data on present land and water use available when they are most useful, surveys of land and water use are being made and published separately for each of the hydrographic units. Bulletin No. 94-3, "Land and Water Use in Yuba-Bear Rivers Hydrographic Unit," is the third of a series reporting the results of these surveys.

At a future date, estimates, largely based on the land and water use surveys, will be made of quantities of water reasonably required for future beneficial use in each watershed. The quantity of water potentially available for export from each watershed will be determined after allowances are made for the satisfaction of the local requirements and prior rights to divert water to other areas. For those watersheds in which no exportable water is available, the water supply deficiency will be determined. These estimates will be published as they become available, in such form as to make possible a county-by-county determination.

The calculations of future water requirements will be based, in part, on predicted future land uses derived from land classification surveys, economic studies, population forecasts, industrial and agricultural development, and recreational needs. Agricultural water requirements will be based on unit water use by the various predicted crop types; urban and recreational requirements on per capita water use values; fish and wildlife requirements on minimum streamflow needed or on water demands for wildlife areas; and industrial water requirements on measured water deliveries to various types and sizes of industries now existing. In forecasting future industrial development, water quality problems will be given full consideration.

Water resources will be determined from records of all stream gaging stations, including new stations which were established for this and other investigations of the department. The new stations were generally constructed on streams which originate in the smaller watersheds for which runoff data are necessary but for which no data have been available. As part of this investigation, two new stream gaging stations were added to the existing network of stations in the Yuba-Bear Rivers Hydrographic Unit. These stations were installed:

Stream gaging station	Date installed
Wolf Creek near Wolf	May 28, 1957
Deer Creek near Nevada City	June 19, 1957

APPENDIX B

REPORTS ON RELATED INVESTIGATIONS AND OTHER REFERENCES

APPENDIX B

REPORTS ON RELATED INVESTIGATIONS AND OTHER REFERENCES

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APPENDIX C

LEGAL CONSIDERATIONS

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TABLES

APPENDIX C

LEGAL CONSIDERATIONS

There are set forth in the following paragraphs brief general statements with respect to the California law of water rights to supplement and to provide a background for information on water rights contained in Chapter II. Also included are comments on litigation concerning local water rights and a tabulation of currently valid applications to appropriate water within the Yuba-Bear Rivers Hydrographic Unit filed with the State Water Rights Board.

California Water Rights

All rights to water in California are usufructuary. They consist only in right to the benefitcial use of the water. Water itself is subject to ownership only when it has been taken into actual possession. However, the owner of a usufructuary right is entitled to have the water in the surface stream flow to the point of his diversion, or to his riparian lands, without the unlawful interference by upstream diverters who have rights which are inferior to his.

Riparian and appropriative rights to surface water are recognized in California. Riparian rights are paramount until lost or impaired by grant, condemnation, or prescription. Correlative rights to ground water, also recognized in California, are analogous to the riparian rights to surface waters.

All water rights, both surface and underground, are subject to the doctrine of reasonable use expressed in Section 3 of Article 14 of the State Constitution. This doctrine limits the rights to the quantity of water reasonably required for beneficial use and prohibits waste, unreasonable use, or unreasonable methods of use or diversion.

Riparian Rights

Riparian rights are part and parcel of riparian lands, i.e., lands contiguous to a natural watercourse within a watershed. They extend only to the smallest tract, so situated, held within the continuous chain of ownership. Each riparian right is correlative with each and every other such right within the watershed. In the event of insufficient water for all, the available supply must be prorated, except that an upper riparian owner may take the whole supply if necessary for domestic use. Riparian rights extend to future reasonable requirements for beneficial use upon riparian lands.

Riparian rights do not authorize use of water on nonriparian lands, nor do they permit the seasonal storage of water. They are not created by use nor are they lost by nonuse. They do not prevent temporary appropriation by others of water not presently needed on riparian lands. The rights may be severed or lost, in the whole or in part, by grant or condemnation, and they cannot thereafter be restored. A parcel of land loses its riparian right when separated from contact with a stream by conveyance, unless the right is

specifically reserved by the grantor. Riparian rights cannot be transferred for use upon another parcel of land. A riparian right may also be lost by prescription.

Riparian rights are superior to appropriative rights, except in the case of rights founded upon appropriations of water upon vacant public lands initiated before valid steps were taken to remove the riparian lands from the domain of the United States, regardless of whether the appropriative diversions and/or the lands they serve are upstream or downstream from the riparian lands.

Appropriative Rights

The miners of the early gold-seeking period established the doctrine of appropriative water rights in California. The oldest of the procedures to perfect an appropriative right required simply that a diversion be made and the water be put to beneficial use. The date of the right began with its beneficial use.

The first provision for recordation as a step in perfecting an appropriative water right was contained in the Civil Code enacted in 1872, Section 1415. The procedure under this section was the posting of a notice of intention at or near the place of proposed diversion, describing the source of the water, the location of the proposed diversion, the amount to be diverted, the use to be made, and the place of

use. This notice was to be signed, witnessed, and a copy filed with the recorder in the county in which the proposed diversion was located. The appropriative right thus initiated became perfected when the water was put to beneficial use, but the right related back to the time the notice was posted. While the 1872 Civil Code procedure was the first to require recordation, it was not an exclusive procedure in that an appropriative right could be perfected to the extent of beneficial use simply by diverting the water and making beneficial use of it.

The Water Commission Act, on the other hand, established an exclusive procedure for the appropriation of water. This enactment requires that a permit be obtained from the State of California before water can be appropriated. The procedure as formerly contained in the Water Commission Act, and as subsequently amended is now codified in the Water Code Sections 1200-1801. It requires that an application to appropriate water first be submitted to the State Water Rights Board. Upon the approval of the application, a permit is issued so that the applicant can construct the features necessary to put the water to beneficial use. When the project has been completed, an inspection of it is made and a license is issued, to the extent of beneficial use, provided the terms and conditions of the permit have been fulfilled.

Once an appropriative water right has been initiated, it must be diligently prosecuted to completion in order to maintain its date of priority. While water may not be appropriated for a distant future use, a reasonable amount of time is allowed to put the full amount of water to use within the original intent of the application to appropriate water.

A right to appropriate water is lost by abandonment or continuous nonuse. In the case of an appropriation initiated prior to 1914, the period of continuous nonuse generally is five year, while in the case of an appropriation initiated under the Water Commission Act or the Water Code, the period of continuous nonuse is generally only three years. Domestic use of water is the highest use and irrigation the next highest use of water as provided in the Water Code.

Applications to appropriate water within the Yuba-Bear Rivers Hydrographic Unit, filed with the State sine 1914 and active on May 29, 1959, are summarized in Table C-1. Those diversions for which an application to appropriate water is filed with the State and which were found in this survey to be of significant size have been assigned diversion numbers which are included in the table. The status of each application as to the granting of a permit or license is also shown in the table.

Ground Water Rights

The permit and license procedure established by the Water Commission Act applies only to streams and other bodies of surface water and to subterranean streams flowing

through known and definite channels. Percolating ground water is therefore excluded, and rights to its use are governed by judicial decisions rather than by statute. Ground waters are presumed to be percolating in the absence of evidence to the contrary.

The owner of land overlying a ground water basin or stratum has, like the riparian owner, a paramount right to the reasonable beneficial use of the natural supply upon his overlying land, which right he holds in common with all other landowners similarly situated. Only surplus water in excess of reasonable requirements for beneficial use upon overlying lands is subject to appropriation for beneficial use upon other lands. Prescriptive rights to ground water may be acquired under the same circumstances as prescriptive rights to water of surface streams.

Where ground water and surface water are interconnected, one acting as a tributary to the other, both are treated as part of a common supply, and users of water from either source are entitled to protection from substantial injury as a result of use by others of water from the other source. Thus, an owner of land riparian to a stream may have his right to the use of water protected against impairment by an appropriator of percolating ground water tributary to the stream and required for the maintenance and support of its flow. Likewise, where water from a stream percolates to a ground water basin or stratum, the owner of land overlying such ground water may be protected from an appropriation of

water of the stream, if such use causes a substantial impairment of the ground water supply. As between riparian use of surface water and overlying use of ground water tributary to the stream, a sharing of the available water supply on the basis of reasonable beneficial use should be made.

State Assistance

Under provisions of the State Water Code, actions involving determinations of rights to the use of water brought in either state or federal courts may, at the court's discretion, be referred to the State Water Rights Board. Under provisions of Water Code Section 2000, the court may appoint the board to referee "any or all issues involved in the suit," or under Section 2001 it may limit the reference to "investigation of and report upon any or all physical facts involved." This reference procedure may be followed in suits involving either or both surface and ground waters.

A simplified procedure is available for adjudication of rights to the use of water of streams, lakes, and other bodies of water, but the method excludes the determination of rights to take water from an underground supply other than from a subterranean stream flowing through known and definite channels. Water Code Sections 2500 to 2900, inclusive, authorize the initiation of such a proceeding before the board. The board then makes an engineering investigation and report, holds hearings, and prepares an order of determination which is submitted to the court. After hearings, the court makes a final determination of the water rights.

Court actions which involve a determination of all the relative rights to the use of water of an entire stream or stream system and/or ground water basin afford a basis for distribution of water after decree under watermaster service. Water users may secure the services of the Department of Water Resources under Water Code Sections 4000 to 4407, inclusive, in making distribution of the water to them according to their respective rights, as determined by the court.

Litigation Concerning Local Water Rights

Water rights in the Yuba-Bear Rivers Hydrographic Unit are based primarily upon riparian status and upon appropriation, as further delimited by private agreements, and adjudications. One major suite, Thomas Sleeman v. Nevada Irrigation District (1932), Nevada County Superior Court Case No. 5566, recorded in Book 34 of Nevada County Official Records page 34, has defined the rights of a number of the water users on Wolf Creek. The following is a brief description of the suit and its results.

Sleeman v. Nevada Irrigation District

In this case, Thomas Sleeman, as owner of riparian lands along Wolf Creek south of Grass Valley in Nevada County, sued Nevada Irrigation District to establish the relationship of their respective water rights. Nevada Irrigation District in turn filed a cross-complaint against Sleeman and other users of Wolf Creek waters. The judgment, dated October 8, 1932, establishes the diversion entitlements of the plaintiff and cross-defendants as against the defendant to the natural

runoff of Wolf Creek. Any water that is imported directly to Wolf Creek, or indirectly through the mines upstream, by the defendant is not natural runoff and may not be diverted by the plaintiff or cross-defendants. In addition to this imported water, the defendant may divert as much of the natural runoff of Wolf Creek flowing at the head of the defendant's Tarr Ditch, that is not required to supply the rights of the plaintiffs and cross-defendants.

TABLE C-1

APPLICATIONS TO APPROPRIATE WATER IN YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

(Filed with State Water Rights Board as of May 29, 1959)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
478	9/23/16	Robert N. Collins	--	Scotchman Creek	SE	NE	18	17N	11E	MD	2.0 cfs	Jan 1-Dec 31	Domestic, fire protection, mining, power, and irrigation, 15 acres	L-4
481	9/25/16	Original 16 to 1 Mine, Inc.	18N/10E-3C1 18N/10E-3C2	Blue Ravine tributary to Kanaka Creek	NE	NW	3	18N	10E	MD	1.0 cfs	Jan 1-Dec 31	Mining	L-368
548	12/28/16	Brian B. and Emma Mae Hughes	12N/7E-36M1 12N/7E-36N1	Secret Ravine Secret Ravine	NE SW	SW SW	36 36	12N 12N	7E 7E	MD MD	0.22 cfs	Jun 1-Oct 1	Irrigation, 65 acres	L-176
863	12/15/17	Ernestine Smith	--	Springs tributary to North Yuba River	SE	SW	28	20N	12E	MD	0.25 cfs	Oct 1-Jun 30	Power	L-555
959	4/1/18	Camp Far West Irrigation District	-- --	Bear River Bear River	NE NE	NE NW	29 29	14N 14N	6E 6E	MD MD	13.24 cfs	May 1-Sept 30	Irrigation, 4,102.37 acres	L-385
1143	12/17/19	Jesse Ennor	19N/13E-20A1	Pass Creek	NW	NE	21	19N	13E	MD	0.37 cfs	Jul 1-Sept 15	Irrigation, 70 acres	L-422
1193	2/25/19	Original 16 to 1 Mine, Inc.	19N/10E-34N1	Buckeye, Nook, and Bull Ravines tributary to Kanaka Creek	SE	SW	34	19N	10E	MD	0.50 cfs	Jan 1-Dec 31	Mining	L-121
1270	5/7/19	Nevada Irrigation District	19N/13E-31N1 18N/12E-11D1 18N/12E-8C1 18N/12E-19P1 18N/12E-12P1 17N/12E-6D1 17N/12E-6M1 -- 13N/8E-2E1 13N/8E-3H1	Jackson Creek Canyon Creek Canyon Creek Canyon Creek Texas Creek Fall Creek Trap Creek Rediversion from Bear River at Parker Dam Rediversion from Bear River at Combie Dam Rediversion from Bear River at Gold Hill Diversion	SW NW SE NE SW NW NW SW SW NE	SW NW SW NW SW NW SW NW NW SE	31 11 5 8 19 6 6 30 2 3	19N 18N 18N 18N 18N 17N 17N 14N 13N 13N	13E 12E 12E 12E 12E 12E 12E 9E 8E 8E	MD MD MD MD MD MD MD MD MD MD	1,060 af 615 af 63,325 af 200 cfs 30 cfs 15 cfs 5.0 cfs	Jan 1-Dec 31 Jan 1-Dec 31 Jan 1-Dec 31 Apr 15-Sept 30 Apr 15-Sept 30 Apr 15-Sept 30 Apr 15-Sept 30	Mining, domestic, and irrigation, 167,789 acres	P-2082
1614	1/8/20	Nevada Irrigation District	16N/9E-2R1 16N/9E-7H1 16N/9E-12K1 -- 16N/9E-18M1 16N/7E-20E1	Deer Creek Deer Creek Deer Creek Deer Creek Deer Creek Deer Creek	SE SE NW SE SW NW	SE NE SE SW SW NW	2 7 12 18 18 20	16N 16N 16N 16N 16N 16N	9E 9E 8E 8E 8E 7E	MD MD MD MD MD MD	60,000 af	Jan 1-Dec 31	Irrigation, 167,789 acres	P-1481
1615	1/8/20	Nevada Irrigation District	16N/7E-20E1 16N/8E-18M1 -- 16N/9E-12K1 16N/9E-7H1 16N/9E-10B1 17N/10E-32M1 17N/10E-34E1	Deer Creek Deer Creek Deer Creek Deer Creek Deer Creek Deer Creek South Fork Deer Creek South Fork Deer Creek	NW SW SE NW SE NW NE SW	NW SW SW SE NE NE SW NW	20 18 18 12 7 10 32 34	16N 16N 16N 16N 16N 16N 17N 17N	7E 8E 8E 8E 9E 9E 10E 10E	MD MD MD MD MD MD MD MD	100 cfs	Apr 1-Oct 1	Irrigation, 167,789 acres	P-5801
1616	1/8/20	Nevada Irrigation District	17N/9E-27H1	South Yuba River	NE	NE	27	17N	8E	MD	125 cfs	Apr 1-Oct 31	Irrigation, 85,000 acres	P-5802
1745	3/31/20	Vernon P. Owens	--	Antelope Ravine	SE	SE	27	12N	7E	MD	0.15 cfs	Apr 1-Nov 1	Irrigation, 35 acres	L-264
1778	4/15/20	John H. Carr and Ervan E. Draper	12N/7E-32N1	Tributary to Antelope Creek	SW	SW	32	12N	7E	MD	0.037 cfs	Apr 1-Sept 30	Irrigation, 13 acres	L-789
1923	7/19/20	I. R. and Mary Sousa	13N/7E-34G1	Sailors Ravine	SW	NE	34	13N	7E	MD	0.125 cfs	Jun 1-Sept 30	Irrigation, 10 acres	L-352
1986	8/26/20	Browns Valley Irrigation District	--	North Yuba River	SE	NW	25	18N	7E	MD	47.2 cfs	Jan 1-Dec 31	Irrigation	Cert. 8
2145	12/17/20	Oroville-Wyandotte Irrigation District	-- --	New York Flat tributary to Dry Creek Rediversion from Dry Creek	NW SW	NW SE	25 26	19N 19N	6E 6E	MD MD	5,000 af	Jan 1-Dec 31	Irrigation, 31,463 acres	P-1269
2190	2/5/21	Mary G. Ferreira and Leslie L. and Violet Moats	13N/7E- 26N1	Cappe Ravine	SW	SW	26	13N	7E	MD	0.12 cfs	Jan 1-Dec 31 May 1-Oct 1	Domestic Irrigation, 10 acres	L-510

* P - Indicates permit number of application approved. L - Indicates license number of right confirmed. Incomplete - Indicates application not yet complete. Pending - Indicates application complete but not yet approved.

APPLICATIONS TO APPROPRIATE WATER IN YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

(Filed with State Water Rights Board as of May 29, 1959)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
2197	2/11/21	Pacific Gas and Electric Co.	18N/7E-24D1	North Yuba River	NW	NW	24	18N	7E	MD	700 cfs 5,000 af	Jan 1-Dec 31 Jan 1-Dec 31	Power	L-435
2275	3/25/21	Nevada Irrigation District	19N/12E-12N1	Middle Yuba River	SW	SE	11	19N	12E	MD	400 cfs 15,000 af	Jan 1-Dec 31 Jan 1-Dec 31	Power	P-2084
			--	Middle Yuba River	SW	SE	18	19N	13E	MD	60,000 af	Jan 1-Dec 31		
			--	Rediversion from Middle Yuba River	SE	SW	5	18N	12E	MD	400 cfs 75,000 af	Jan 1-Dec 31 Jan 1-Dec 31		
2276	3/25/21	Nevada Irrigation District	19N/12E-12N1	Middle Yuba River	SW	SE	11	19N	12E	MD	400 cfs 15,000 af	May 1-Sept 30 May 1-Sept 30	Irrigation, 154,211 acres	P-2085
			--	Middle Yuba River	SW	SE	18	19N	13E	MD	60,000 af	Jan 1-Dec 31		
			--	Rediversion from Middle Yuba River	SE	SW	5	18N	12E	MD	400 cfs 75,000 af	Jan 1-Dec 31 Jan 1-Dec 31		
2372	6/3/21	Nevada Irrigation District	19N/13E-31N1	Jackson Creek	SW	SW	31	19N	13E	MD	1,060 af	Dec 1-Jul 15	Power	P-2087
			18N/12E-11D1	Canyon Creek	NW	NW	11	18N	12E	MD	615 af	Dec 1-Jul 15		
			18N/12E-8C1	Canyon Creek	SE	SW	5	18N	12E	MD	63,325 af	Dec 1-Jul 15		
			18N/12E-8C2	Canyon Creek	NE	NW	8	18N	12E	MD	250 cfs	Jan 1-Dec 31		
			18N/12E-19P1	Texas Creek	SW	SW	19	18N	12E	MD	30 cfs	Jan 1-Dec 31		
			17N/12E-6D1	Fall Creek	NW	NW	6	17N	12E	MD	15 cfs	Jan 1-Dec 31		
			17N/12E-6M1	Trap Creek	NW	SW	6	17N	12E	MD	5 cfs	Jan 1-Dec 31		
2406	6/25/21	Loe Verjels Land and Water Co.	18N/6E-34Q1	Dry Creek	SW	SE	34	18N	6E	MD	25 cfs	Jan 1-Dec 31	Irrigation	Cert. 14
			17N/6E-4P1	Dry Creek	SE	NE	4	17N	6E	MD	8,600 af	Jan 1-Dec 31		
2652	11/22/21	Nevada Irrigation District	--	Flood waters of Bear River	SW	NW	30	14N	9E	MD	87,500 af	Nov 30-Jun 1	Irrigation, 107,789 acres	P-11626
2750	2/9/22	Pacific Gas and Electric Co.	18N/13E-34J1	Fordyce Creek	NE	SE	34	18N	13E	MD	26,582 af	Nov 1-Jun 30	Power	L-986
			--	Rediversion from Fordyce Creek	SW	NW	21	17N	12E	MD				
2753	2/9/22	Pacific Gas and Electric Co.	15N/9E-22Q1	Bear River - Regulated flow from Lurgue Reservoir under Application No. 2750	SW	SE	22	15N	9E	MD	100 cfs	Jun 30-Nov 1	Power	L-987
2823	4/20/22	Anna E. Flanagan	--	Nigger Ravine	NE	SW	27	22N	10E	MD	11.0 cfs	Jan 1-Dec 31	Mining	L-678
2881	6/13/22	Camp Far West Irrigation District	14N/6E-21L1	Bear River	NE	SW	21	14N	6E	MD	5,000 af	Mar 1-Jun 1	Irrigation, 4,102.37 acres	L-2966
			--	Bear River	NE	NE	29	14N	6E	MD				
			--	Bear River	NE	NW	29	14N	6E	MD				
2978	8/12/22	Oroville-Wyandotte Irrigation District	--	Dry Creek	SW	SE	26	19N	6E	MD	150 cfs	Apr 1-Oct 15	Irrigation, 31,463 acres	P-1270
3026	9/7/22	Pacific Gas and Electric Co.	18N/7E-24D1	North Yuba River	NW	NW	24	18N	7E	MD	10,000 af	Dec 1-Jul 15	Power	L-436
3038	9/15/22	Iwami Nishimoto	12N/8E-17K1	Auburn Ravine	S½	NE	16	12N	8E	MD	0.03 cfs	Apr 1-Oct 1	Irrigation, 6 acres	L-792
3222	1/13/23	Pacific Gas and Electric Co.	--	Sandy Flat Ravine	SW	NW	24	18N	7E	MD	0.025 cfs	Jan 1-Dec 31	Domestic	L-437
3550	7/26/23	Pacific Gas and Electric Co.	18N/13E-34J1	Fordyce Creek	NE	SE	34	18N	13E	MD	26,670 af	Nov 1-Jun 30	Irrigation, 14,120 acres	P-1694
			--	Fordyce Creek	NW	SE	22	15N	9E	MD				
3789	1/7/24	L. E. Wyatt and I. C. Lewis	11N/7E-20J1	Pennsylvania Ravine	NE	SE	20	11N	7E	MD	0.06 cfs	Apr 1-Sept 30	Irrigation, 25 acres	L-920
3995	5/20/24	E. N. and Callie J. Robbins	14N/8E-32D1	Dry Creek	NW	NW	32	14N	8E	MD	40 af	Nov 1-May 1	Irrigation, 30 acres	L-1012
4026	6/13/24	Edward J., Boy, and K. Brown	11N/7E-27L1	Big Chief Creek and Boulder Creek	NE	SW	27	11N	7E	MD	0.31 cfs	May 1-Oct 31	Irrigation, 31 acres	L-733
4309	11/7/24	Nevada Irrigation District	17N/12E-20J1	Foreign water in South Yuba River	SE	NE	20	17N	12E	MD	135 cfs	Jan 1-Dec 31	Power	L-1544
			17N/12E-20J2	imported under Applications 2275 and 2372	SW	NW	21	17N	12E	MD				
			16N/11E-17E1		SW	NW	17	16N	11E	MD				

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TABLE C-1 (Continued)

APPLICATIONS TO APPROPRIATE WATER IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
(Filed with State Water Rights Board as of May 29, 1959)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
4310	11/7/24	Nevada Irrigation District	17N/12E-20J1 17N/12E-20J2	Foreign water in South Yuba River imported under Applications 2275 and 2372	SE SW	NE NW	20 21	17N 17N	12E 12E	MD MD	126 cfs	Jan 1-Dec 31	Power	L-1707
4494	3/6/25	Fidelity Title Insurance Co.	17N/8E-25Q1	Rock Creek	SW	SE	25	17N	8E	MD	70.0 af	Oct 1-Apr 1	Fish culture and recreation	L-781
4597	5/22/25	Miss Ethel Mulligan	12N/7E-9P1	Auburn Ravine	SE	SW	9	12N	6E	MD	0.15 cfs	May 15-Oct 15	Irrigation, 48 acres	L-948
4717	8/4/25	Edgar E. and Ina E. Pellett	13N/7E-29B1	Tributary to Doty Ravine	NW	NE	29	13N	7E	MD	0.075 cfs	May 15-Oct 15	Domestic and irrigation, 20 acres	L-709
4731	8/12/25	Ray and Vada Herrera	—	Spring tributary to Goodyear Creek	SW	NW	5	19N	10E	MD	2,160 gpd	Jan 1-Dec 31	Domestic	L-735
4764	9/5/25	Harry Mulock	19N/7E-17P1	Costa Creek tributary to Dry Creek	SE	NW	17	19N	7E	MD	7,200 gpd	Feb 1-Dec 1	Domestic	L-898
5004	4/30/26	Pacific Gas and Electric Co.	18N/7E-24D1 18N/7E-25F1	North Yuba River North Yuba River	NW SW	NW NW	24 25	18N 18N	7E 7E	MD MD	15,000 af	Dec 15-Jul 15	Power	L-777
5041	6/1/26	Mitsunori and Bill Domen	—	Doty's Ravine	NE	NE	12	12N	7E	MD	0.12 cfs	May 1-Nov 1	Irrigation, 10 acres	L-796
5193	9/8/26	Nevada Irrigation District	— —	Middle Yuba River Middle Yuba River	SW SW	SW SE	12 18	19N 19N	13E 13E	MD MD	50,000 af	Jan 1-Dec 31	Irrigation	Pending
5413	4/11/27	T. M. Nevae	12N/7E-36E1	Buckeye Ravine	SW	NW	36	12N	7E	MD	0.19 cfs	Apr 1-Sept 30	Domestic and irrigation, 14 acres	L-3008
5590	7/1/27	Soper-Wheeler Company	—	West Branch Rich Gulch	SE	NE	29	20N	8E	MD	0.003 cfs	Jan 1-Dec 31	Domestic and irrigation	L-814
5591	7/1/27	John A. Sean	—	East Branch Rich Gulch	SE	NE	29	20N	8E	MD	0.003 cfs	Jan 1-Dec 31	Domestic and irrigation	L-816
5631	7/30/27	Department of Water Resources	— —	Yuba River Yuba River		SW NW	22 27	16N 16N	6E 6E	MD MD	1,800 cfs 490,000 af	Jan 1-Dec 31 Jan 1-Dec 31	Power	Incomplete
5632	7/20/27	Department of Water Resources	— —	Yuba River Yuba River		SW NW	22 27	16N 16N	6E 6E	MD MD	1,700 cfs 490,000 af	Jan 1-Dec 31 Jan 1-Dec 31	Domestic and irrigation	Incomplete
5633	7/30/27	Department of Water Resources	—	Bear River		NW	30	14N	9E	MD	120 cfs 110,000 af	Jan 1-Dec 31	Power	Incomplete
5634	7/30/27	Department of Water Resources	— —	Bear River Bear River	W½		21 30	14N 14N	6E 9E	MD MD	400 cfs 110,000 af	Jan 1-Dec 31 Jan 1-Dec 31	Domestic, flood control, salinity control, navigation, and irrigation, 2,500,000 acres	Incomplete
5677	9/7/27	Soper-Wheeler Company	—	West Branch Rich Gulch	SW	NE	29	20N	8E	MD	0.025 cfs	Jan 1-Dec 31	Mining	L-815
5678	9/7/27	John A. Sean	—	East Branch Rich Gulch	SE	NE	29	20N	8E	MD	0.025 cfs	Jan 1-Dec 31	Mining	L-817
5719	10/13/27	Fidelity Title Insurance Co.	17N/8E-25Q1	Rock Creek	SW	SE	25	17N	8E	MD	2.00 cfs	Apr 1-Oct 1	Fish culture and recreation	L-782
5806	1/16/28	George F. and Dixie M. Meridith	11N/7E-5R1	Antelope Creek	SE	SE	5	11N	7E	MD	0.11 cfs	Apr 1-Oct 15	Domestic and irrigation, 27 acres	L-1071
5880	4/16/28	Jerome C. Coughlan	— — —	Roberts Creek Glennin Ravine Bonnie Ravine	NE NW SE	NE SE NE	33 4 4	18N 17N 17N	9E 9E 9E	MD MD MD	1.00 cfs 0.14 cfs 0.26 cfs	Apr 15-Oct 15 Apr 15-Oct 15 Apr 15-Oct 15	Domestic and irrigation, 77 acres	L-2172

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					1/4	1/4	Sec.	Tp.	R.	B. & M.				
5970	7/5/28	Pacific Gas and Electric Co.	16N/11E-17E1	Natural flow and regulated and/or augmented flow of Bear River (Rediversion)	SW	NW	17	16N	11E	MD	525 cfs	Jan 1-Dec 31	Power	P-5725
			--		SW	SE	33	16N	10E	MD				
6096	10/19/28	Soper-Wheeler Company	--	West Branch Rich Gulch	SW	NE	29	20N	8E	MD	930 gpd	Jan 1-Dec 31	Domestic and irrigation	L-1084
6097	10/19/28	Soper-Wheeler Company	--	West Branch Rich Gulch	SW	NE	29	20N	8E	MD	0.025 cfs	Jan 1-Dec 31	Operation of a hydraulic ram	L-1085
6099	10/19/28	Soper-Wheeler Company	--	East Branch Rich Gulch	SE	NE	29	20N	8E	MD	0.025 cfs	Jan 1-Dec 31	Operation of a hydraulic ram	L-1080
6120	11/13/28	Ray and Vada Herrera, et al.	--	Tributary to Woodyear Creek	SW	SW	32	20N	10E	MD	1,500 gpd	Jan 1-Dec 31	Domestic	L-1309
6229	3/26/29	Nevada Irrigation District	15N/9E-22Q1	Bear River	SW	SE	22	15N	9E	MD	120 cfs	Apr 1-Oct 31	Mining, domestic, and irrigation, 167,789 acres	P-5804
6286	5/13/29	Sierra Ski Club	--	Zero Spring	NW	SE	24	17N	14E	MD	2,500 gpd	Jan 1-Dec 31	Domestic	L-2427
6332	6/19/29	Pacific Gas and Electric Co.	15N/9E-22Q1	Augmented flow of Bear River	SW	SE	22	15N	9E	MD	120 cfs	Jan 1-Dec 31	Power	L-1375
6529	1/9/30	Nevada Irrigation District	12N/6E-13A1	Auburn Ravine	NW	NE	13	12N	6E	MD	8.0 cfs	Apr 1-Nov 1	Irrigation, 417 acres	L-4403
6543	1/25/30	J. M. and Walter Sanford	--	Dry Creek	SE	NW	34	15N	6E	MD	0.41 cfs	Apr 1-Nov 1	Domestic, stockwatering, and irrigation, 32.5 acres	L-1771
6563	2/13/30	United States Tahoe National Forest	--	Spring tributary to North Yuba River	NE	NE	1	20N	12E	MD	700 gpd	May 1-Oct 31	Domestic	L-4000
6701	6/16/30	Nevada Irrigation District	18N/11E-36J1	Clear Creek	NE	SE	36	18N	11E	MD	5.0 cfs	Jan 1-Dec 31	Power	P-5806
			17N/12E-6D1	Fall Creek	NW	NW	6	17N	12E	MD	10.0 cfs	Jan 1-Dec 31		
			17N/12E-6M1	Trap Creek	NW	SW	6	17N	12E	MD	5.0 cfs	Jan 1-Dec 31		
6702	6/16/30	Nevada Irrigation District	18N/11E-36J1	Clear Creek	NE	SE	36	18N	11E	MD	5.0 cfs	Apr 15-Sept 30	Irrigation, 167,789 acres	P-5807
			17N/12E-6D1	Fall Creek	NW	NW	6	17N	12E	MD	10.0 cfs	Apr 15-Sept 30		
			17N/12E-6M1	Trap Creek	NW	SW	6	17N	12E	MD	5.0 cfs	Apr 15-Sept 30		
6731	7/15/30	W. C. and A. Cunningham	--	Mosquito Creek	SW	NW	22	18N	8E	MD	0.15 cfs	Mar 15-Dec 1	Domestic and irrigation, 8 acres	L-2220
6834	11/19/30	Langdon Smith	--	Spring tributary to Spanish Ravine	SW	NE	5	19N	10E	MD	600 gpd	Jan 1-Dec 31	Domestic	L-1878
6870	1/14/31	Alpha Stores, Ltd.	--	Steep Hollow Creek	NW	SE	14	16N	10E	MD	26.0 cfs	Jan 1-Dec 31	Mining and domestic	L-2107
			--	South Fork Greenhorn Creek	SW	NE	20	16N	10E	MD	12.5 cfs	Jan 1-Dec 31		
7072	9/3/31	Western Gold, Inc.	--	Rob Roy Canyon	SW	NW	25	18N	10E	MD	2.0 cfs	Dec 1-Jul 1	Mining	L-2606
			--	Deadman Canyon	NE	SE	26	18N	10E	MD	4.0 cfs	Dec 1-Jul 1		
			--	Roscoe Canyon	SE	NE	34	18N	10E	MD	15.0 cfs	Dec 1-Jul 1		
			--	Logan Canyon	SW	SW	34	18N	10E	MD	35.0 cfs	Dec 1-Jul 1		
7189	2/18/32	C. L. and H. E. Carroll	--	Tributary to North Yuba River	Lot	5	6	19N	10E	MD	0.15 cfs	Jan 1-Dec 31	Mining and domestic	L-1927
7216	3/21/32	Charles J. and Ethel V. Scanlon and Elaine S. Hottorff	--	South Fork Indian Creek	NE	SE	20	19N	9E	MD	2.00 cfs	Jan 1-Dec 31	Mining and domestic	L-1665
			--	North Fork Indian Creek	NE	SW	21	19N	9E	MD	0.025 cfs	Jan 1-Dec 31		
7217	3/28/32	Thaddeus C. and G. V. Rhoades	17N/8E-6R1	Tributary to North Yuba River	SE	SE	6	17N	8E	MD	9.50 af	Nov 1-Jun 1	Stockwatering and irrigation, 22 acres	L-2197
7523	3/27/33	Floyd J. and Leta E. Ketcham	--	Graveyard Ravine	NE	SW	26	20N	10E	MD	16,000 gpd	Jan 1-Dec 31	Domestic	L-1663
7608	7/5/33	United States Tahoe National Forest	--	Spring tributary to Fiddle Creek	SE	SE	7	19N	9E	MD	1,800 gpd	Jan 1-Dec 31	Domestic	L-1863

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					1/4	1/4	Sec.	Tp.	R.	B. & M.				
7611	7/6/33	A. J. and Florence A. Kelly	--	Spring tributary to Wolf Creek	NW	SE	23	16N	8E	MD	0.01 cfs	Jan 1-Dec 31	Domestic and irrigation	L-1760
7646	8/14/33	Joe Boiss	11N/7E-20G1	Secret Ravine	SW	NE	20	11N	7E	MD	0.12 cfs	Apr 1-Oct 1	Domestic and irrigation, 40 acres	L-2463
7657	8/28/33	Ben Rose	--	Spring tributary to Dry Creek	SW	NE	6	18N	7E	MD	3.0 MI	Jan 1-Dec 31	Domestic and irrigation, 20 acres	P-4230
7665	9/8/33	Axel and Lucy Nasholm	--	Tributary to North Yuba River	NE	SW	33	20N	10E	MD	28,000 gpd	Apr 15-Dec 15	Domestic and irrigation, 2.5 acres	L-1978
7691	9/28/33	United States Tahoe National Forest	--	Gentle Annie Spring tributary to Ramshorn Creek	SE	NE	1	19N	9E	MD	340 gpd	Jan 1-Dec 31	Recreation and domestic	L-1864
7704	10/9/33	Hermon M. Stark	--	Glennen Canyon	SE	NW	34	18N	9E	MD	3.0 cfs	Jan 1-Dec 31	Mining	L-1732
7716	10/23/33	Edith M. Waddell	--	Nigger Creek	SE	NE	34	20N	11E	MD	2.5 cfs	May 1-Oct 31	Mining and domestic	L-2127
			--	Nigger Creek	NE	NE	34	20N	11E	MD				
7746	11/9/33	Lee and Helen Lansford	--	Darling Canyon tributary to Greenhorn Creek	NW	NE	30	16N	10E	MD	3.0 cfs	Jan 1-Dec 31	Mining and domestic	L-2211
7753	11/16/33	Lee and Helen Lansford	--	Hussey Canyon tributary to Little Greenhorn Creek	NW	NW	29	16N	10E	MD	4.0 cfs	Jan 1-Dec 31	Mining and domestic	L-2212
			--	Long Canyon tributary to Little Greenhorn Creek	NE	NW	29	16N	10E	MD	3.0 cfs	Jan 1-Dec 31		
			--	Darling Canyon tributary to Little Greenhorn Creek	NW	NE	20	16N	10E	MD	3.0 cfs	Jan 1-Dec 31		
7767	11/27/33	United States Forest Service Tahoe National Forest	--	Spring tributary to North Yuba River	NE	SE	17	19N	9E	MD	275 gpd	Jan 1-Dec 31	Recreation	L-1865
8015	7/9/34	Ralph B. Aitken	11N/7E-17M1	Antelope Creek	SW	NW	17	11N	7E	MD	0.59 cfs	Mar 1-Nov 1	Irrigation, 67 acres	L-2604
8037	7/25/34	George Mavrias	11N/6E-25G1	Antelope Creek	SW	NE	25	11N	6E	MD	0.44 cfs	Feb 1-Dec 1	Irrigation, 55 acres	L-2249
8123	10/9/34	United States Tahoe National Forest	--	Spring tributary to Woodruff Creek	SE	NW	8	19N	10E	MD	2,000 gpd	Jan 1-Dec 31	Domestic	L-1866
8177	11/27/34	Nevada Irrigation District	19N/12E-14N1	Wilson Creek	SE	NE	14	19N	12E	MD	25 cfs 3,000 af	Jan 1-Dec 31	Domestic and irrigation, 167,789 acres	P-5812
			19N/12E-14F1	Poison Creek	SE	NW	14	19N	12E	MD	25 cfs 3,000 af	Jan 1-Dec 31		
			--	Rediversion at Canyon Creek	SE	SW	5	18N	12E	MD				
			17N/12E-27M1	Rediversion at South Yuba River	NE	NE	27	17N	8E	MD				
			--	Rediversion at South Yuba River	SE	NE	20	17N	12E	MD				
8178	11/27/34	Nevada Irrigation District	18N/12E-19P1	Texas Creek	SW	SW	19	18N	12E	MD	70 cfs	Jan 1-Dec 31	Power	P-5813
			18N/11E-36J1	Clear Creek	NE	SE	36	18N	11E	MD	30 cfs	Jan 1-Dec 31		
			17N/12E-6Q1	Fall Creek	NW	NW	6	17N	12E	MD	85 cfs	Jan 1-Dec 31		
			17N/12E-6M1	Trap Creek	NW	SW	6	17N	12E	MD	15 cfs	Jan 1-Dec 31		
			17N/12E-7N1	Rucker Creek	SE	NE	7	17N	12E	MD	25 cfs	Jan 1-Dec 31		
			--	Rediversion at South Yuba River	SE	NE	20	17N	12E	MD				
			--	Rediversion at Bear River	SW	NW	17	16N	11E	MD				
			--	Rediversion at Bear River	SE	SE	27	16N	10E	MD				
			--	Rediversion at Bear River	SW	SE	22	15N	9E	MD				
8179	11/27/34	Nevada Irrigation District	19N/12E-14N1	Wilson Creek	SE	NE	14	19N	12E	MD	25 cfs 3,000 af	Jan 1-Dec 31	Power	P-5814
			19N/12E-14F1	Poison Creek	SE	NW	14	19N	12E	MD	25 cfs 3,000 af	Jan 1-Dec 31		
			--	Rediversion at Canyon Creek	SE	SW	5	18N	12E	MD				
			18N/11E-36J1	Rediversion at Clear Creek	NE	SE	36	18N	11E	MD				
			17N/12E-6M1	Rediversion at Trap Creek	NW	SW	6	17N	12E	MD				
			17N/12E-7N1	Rediversion at Rucker Creek	SE	NE	7	17N	12E	MD				
			--	Rediversion at South Yuba River	SE	NE	20	17N	12E	MD				
			--	Rediversion at Bear River	SW	NW	17	16N	11E	MD				
			--	Rediversion at Bear River	SE	SE	27	16N	10E	MD				
			--	Rediversion at Bear River	SW	SE	22	15N	9E	MD				

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					¼	¼	Sec.	Tp.	R.	B. & M.				
8180	11/27/34	Nevada Irrigation District	18N/11E-36J1	Clear Creek	NE	SE	36	18N	11E	MD	30 cfs 6,000 af	Jan 1-Dec 31	Domestic and irrigation, 167,789 acres	P-5815
			18N/12E-19P1	Texas Creek	SW	SW	19	18N	12E	MD	70 cfs 14,000 af	Jan 1-Dec 31		
			17N/12E-6D1	Fall Creek	NW	NW	6	17N	12E	MD	85 cfs 17,000 af	Jan 1-Dec 31		
			17N/12E-6M1	Trap Creek	NW	SW	6	17N	12E	MD	15 cfs 3,000 af	Jan 1-Dec 31		
			17N/12E-7H1	Rucker Creek	SE	NE	7	17N	12E	MD	25 cfs 5,000 af	Jan 1-Dec 31		
			--	Rediversion at South Yuba River	SE	NE	20	17N	12E	MD				
			17N/8E-27H1	Rediversion at South Yuba River	NE	NE	27	17N	8E	MD				
			--	Rediversion at Bear River	SW	NW	30	14N	9E	MD				
8230	2/6/35	Arisota Corporation	--	Rock Creek	SW	SE	8	20N	9E	MD	5.0 cfs	Sept 15-Aug 15	Power	L-2290
8299	3/25/35	D. H. Hotchkin	--	McKinnon Ravine also called Grants Ravine tributary to North Yuba River	NW	NW	14	20N	10E	MD	3.0 cfs	Jan 1-Dec 31	Power	L-2388
8330	5/4/35	J. K. and Francee L. Latta	--	Coyote Ravine	NW	NE	34	20N	10E	MD	4,500 gpd	Jan 1-Dec 31	Domestic	L-1928
8343	5/25/35	Kenneth and Esther Heimback	--	Spring tributary to South Yuba River	NW	SW	27	17N	13E	MD	14,400 gpd	Jan 1-Dec 31	Domestic and fire protection	L-1903
			--	Spring tributary to South Yuba River	NW	SW	27	17N	13E	MD	86,400 gpd	Jan 1-Dec 31		
8361	6/17/35	Maurine W. Cook and Theodore W. Rimer	--	Spring tributary to North Yuba River	SE	NW	4	19N	10E	MD	400 gpd	Jun 1-Sept 15	Domestic	L-2281
8465	10/5/35	Sierra Club, et al.	--	Spring tributary to Lytton Creek	NW	SW	17	17N	15E	MD	5,000 gpd	Jan 1-Dec 31	Domestic	L-2628
8493	11/13/35	United States Tahoe National Forest	--	Jerrett Spring tributary to Oregon Creek	SW	SW	6	18N	9E	MD	5,500 gpd	Jan 1-Dec 31	Domestic	L-2139
8527	12/27/35	J. C. Coughlan	--	Bonnie Ravine tributary to Spring Creek	SE	NE	4	17N	9E	MD	5,000 gpd	Jan 1-Dec 31	Domestic	L-2173
8557	2/15/36	Carl L. Johnson and D. N. Casey	--	Oregon Creek	SW	SE	29	19N	10E	MD	10.0 cfs	Oct 1-Jul 1	Mining	L-2687
8717	6/25/36	Carl L. Johnson and D. N. Casey	--	Tributary to Oregon Creek	NW	NE	2	18N	9E	MD	8.0 cfs	Oct 1-Jul 1	Mining	L-2688
			--	Tributary to Oregon Creek	SE	SE	35	19N	9E	MD				
			--	Tributary to Oregon Creek	NE	SW	36	19N	9E	MD				
			--	Tributary to Oregon Creek	NW	SE	36	19N	9E	MD				
			--	Tributary to Oregon Creek	NW	SW	31	19N	10E	MD				
			--	Tributary to Oregon Creek	NW	SE	31	19N	10E	MD				
			--	Tributary to Oregon Creek	NW	SE	31	19N	10E	MD				
			--	Jersey Ravine tributary to Oregon Creek	SE	SW	29	19N	10E	MD				
8794	9/21/36	Pacific Gas and Electric Co.	16N/6E-14C1	Yuba River	Lot 5		14	16N	6E	MD	700 cfs 67,000 af	Jan 1-Dec 31	Power	P-5775
8984	6/2/37	Norins Mining Company	--	Rock Creek	SW	SW	11	19N	10E	MD	0.333 cfs	Jan 1-Dec 31	Mining	L-2367
9449	11/2/38	Clark E. and J. Jean McHuron	--	Secret Creek	S½ of Lot 8		31	20N	11E	MD	300 gpd	Apr 1-Nov 1	Domestic	L-3455
9489	1/18/39	Edith M. Waddell	--	Nigger Creek	SE	NE	34	20N	11E	MD	0.40 cfs	May 1-Dec 1	Power and domestic	L-2621
9500	1/31/39	George F. and Dixie M. Meridith	11N/7E-5R1	Antelope Creek	SE	SE	5	11N	7E	MD	0.23 cfs	Apr 1-Oct 15	Irrigation, 27 acres	L-3137
9516	3/1/39	Pacific Gas and Electric Co.	18N/7E-25F1	North Yuba River	SW	NW	25	18N	7E	MD	100 cfs	Jan 1-Dec 31	Power	L-3050
9561	4/19/39	United States Tahoe National Forest	--	Baker Spring tributary to Brush Creek	SW	NW	29	19N	10E	MD	10,000 gpd	Mar 1-Nov 30	Domestic, stockwatering, and fire protection	L-2480

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TABLE C-1 (Continued)

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YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
(Filed with State Water Rights Board as of May 29, 1959)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
9617	6/15/39	M. P. Fischer	19N/10E-8F1	Woodruff Creek tributary to North Yuba River	SE	NW	8	19N	10E	MD	0.055 cfs	May 1-Oct 1	Domestic, fire protection, and irrigation, 1.85 acres	L-2705
9651	6/30/39	Zoann Pops Walsey	--	Moonshine Creek	SE	SE	29	18N	8E	MD	5,000 gpd	Jan 1-Dec 31	Domestic	L-2777
9750	10/13/39	Mary Ann McAllister and P. W. Elliott and heirs of B. O. Elliott	21N/11E-18R1 21N/10E-36R1	Empire Creek Spring tributary to Empire Creek	SE SW	SE SE	19 30	21N 21N	11E 11E	MD MD	2.0 cfs 1.0 cfs	Apr 1-Jul 1 Apr 1-Jul 1	Mining	L-3069
9765	11/9/39	Al and Bessie Crowder	--	Hardy Spring tributary to North Yuba River	NE	SW	36	20N	10E	MD	2,700 gpd	May 1-Nov 1	Domestic	L-4921
9827	2/16/40	Downieville Public Utility District	20N/10E-26K1	Pauley Creek	NW	SE	26	20N	10E	MD	1.11 cfs	Jan 1-Dec 31	Municipal	L-2650
10009	9/23/40	Dickey Exploration Company	-- --	Wet Ravine tributary to Kanaka Creek Wet Ravine tributary to Kanaka Creek	NW SW	NE NE	4 4	18N 18N	10E 10E	MD MD	0.134 cfs	Jan 1-Dec 31	Mining and fire protection	L-4866
10012	9/24/40	Ray and Lillian LaFaille	-- 12N/7E-21C1 -- --	Badger Ravine Badger Ravine Badger Ravine Tributary to Auburn Ravine	NW NE SE SW	NE NW SW SW	21 21 16 16	12N 12N 12N 12N	7E 7E 7E 7E	MD MD MD MD	1.2 cfs 72 af	Apr 1-Nov 1 Nov 1-Jun 1	Irrigation, 90 acres	P-5671
10038	10/17/40	United States Tahoe National Forest	--	Summit Spring No. 1 tributary to South Yuba River	NW	NE	20	17N	15E	MD	5,000 gpd	Jan 1-Dec 31	Domestic	L-4893
10039	10/17/40	United States Tahoe National Forest	--	Emigrant Valley Spring	SE	NW	28	17N	15E	MD	170 gpd	May 1-Oct 31	Domestic and stockwatering	L-3935
10103	1/25/41	Pioneer Project Partnership	21N/9E-13R1	Deacon Long Ravine	SW	SE	13	21N	9E	MD	12.5 cfs	Jan 1-Jul 15	Mining	L-3030
10104	1/25/41	W. H. Pike and Andrew J. Hodglin	-- 21N/10E-7K1 -- --	Cedar Grove Ravine tributary to Slate Creek Stahl Ravine tributary to Slate Creek Greenwood Ravine tributary to Slate Creek Tributary to Greenwood Ravine tributary to Slate Creek Star Ravine tributary to Slate Creek	SE NE SW SW SE	NW SW SW SW SE	7 7 7 7 12	21N 21N 21N 21N 21N	10E 10E 10E 10E 9E	MD MD MD MD MD	16.0 cfs 4.0 cfs 4.0 cfs 4.0 cfs 2.0 cfs	Jan 1-Dec 31 Jan 1-Dec 31 Jan 1-Dec 31 Jan 1-Dec 31 Jan 1-Dec 31	Mining	P-7332
10150	3/22/41	United States Tahoe National Forest	--	King Woolford Spring	SW	SW	11	16N	10E	MD	600 gpd	Apr 1-Dec 1	Stockwatering	L-2656
10151	3/22/41	United States Tahoe National Forest	--	Robbins Cabin Spring	SE	SE	19	18N	10E	MD	2,100 gpd	Apr 1-Dec 1	Stockwatering and fire protection	L-2657
10152	3/22/41	United States Tahoe National Forest	--	Big Tunnel Spring	SW	SW	29	17N	11E	MD	715 gpd	Apr 1-Dec 1	Stockwatering, recreation, and fire protection	L-2658
10153	3/22/41	United States Tahoe National Forest	--	Logan Spring	SE	SE	33	18N	10E	MD	1,500 gpd	Apr 1-Dec 1	Stockwatering and fire protection	L-2659
10154	3/22/41	United States Tahoe National Forest	--	Big Lick Springs	SW	SW	26	18N	10E	MD	1,900 gpd	Apr 1-Dec 1	Stockwatering, recreation, and fire protection	L-2660
10155	3/22/41	United States Tahoe National Forest	--	Dempsey Springs	NW	NW	35	18N	10E	MD	1,300 gpd	Apr 1-Dec 1	Stockwatering, recreation, and fire protection	L-2661
10156	3/22/41	United States Tahoe National Forest	--	White Cloud Springs	SW	NW	23	17N	10E	MD	14,000 gpd	May 1-Nov 30	Domestic and fire protection	L-4888
10158	3/22/41	United States Tahoe National Forest	--	Coleman Springs	NW	SW	33	18N	10E	MD	1,900 gpd	Apr 1-Dec 1	Stockwatering, recreation, and fire protection	L-2662
10159	3/22/41	United States Tahoe National Forest	--	Skillman Flat Spring	NW	NW	30	17N	11E	MD	660 gpd	Apr 1-Dec 31	Domestic	L-4175

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APPLICATIONS TO APPROPRIATE WATER IN YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

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Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					¼	¼	Sec.	Tp.	R.	B. & M.				
10160	3/22/41	United States Tahoe National Forest	—	Demery Springs	NE	SW	4	17N	10E	MD	650 gpd	Apr 1-Dec 1	Stockwatering	L-2663
10161	3/22/41	United States Tahoe National Forest	--	Upper Derbec Springs	NW	SE	29	18N	10E	MD	1,800 gpd	Apr 1-Dec 1	Stockwatering and fire protection	L-2664
10162	3/22/41	United States Tahoe National Forest	—	Snow Tent Spring	NW	NW	26	18N	10E	MD	13,000 gpd	Apr 1-Dec 1	Stockwatering, recreation, and fire protection	L-2665
10163	3/22/41	United States Tahoe National Forest	—	Derbec Springs Creek	SW	SE	29	18N	10E	MD	3,900 gpd	Apr 1-Dec 1	Stockwatering and fire protection	L-2666
10164	3/22/41	United States Tahoe National Forest	—	Willow Springs	NE	SE	30	18N	10E	MD	5,850 gpd	Apr 1-Dec 1	Stockwatering and fire protection	L-2667
10173	3/29/41	Samuel Ballard White, Jr.	--	Slate Castle Ravine	NW	SW	36	20N	10E	MD	0.10 cfs	Apr 1-Oct 1	Irrigation, 3.5 acres	L-4026
10181	4/9/41	James M. Stevens	17N/5E-34K1	Little Dry Creek	NW	SE	34	17N	5E	MD	0.25 cfs	Apr 15-Oct 15	Irrigation, 20 acres	L-2944
10186	4/18/41	Edwin L. and Vera Larkin	—	Spring tributary to North Tuba River	SW	SE	31	20N	11E	MD	3,000 gpd	Jan 1-Dec 31	Domestic and fire protection	L-2957
10190	4/28/41	Camp Far West Irrigation District	14N/6E-21L1 -- --	Bear River Rediversion from Bear River Rediversion from Bear River	NE NE NE	SW NE NW	21 29 29	14N 14N 14N	6E 6E 6E	MD MD MD	5,000 af	May 1-Jun 1	Irrigation, 4,102.37 acres	L-2740
10221	6/13/41	Department of Water Resources	—	Bear River		W½	21	14N	6E	MD	250 cfs 40,000 af	Jan 1-Dec 31 Oct 1-Sept 30	Domestic, flood control, salinity control, navigation and irrigation, 2,500,000 acres	Incomplete
10282	9/11/41	Pacific Gas and Electric Co.	18N/7E-24D1 18N/7E-25F1 16N/6E-14Q1	North Tuba River Rediversion from North Tuba River Rediversion from North Tuba River	NW SW SE	NW NW SW	24 25 14	18N 18N 16N	7E 7E 6E	MD MD MD	5,335 af	Oct 1-Mar 1	Power	P-8330
10330	11/26/41	United States Tahoe National Forest	—	Springs tributary to Oregon Creek	SE	NE	28	18N	8E	MD	500 gpd	Jan 1-Dec 31	Recreation	L-2668
10439	5/6/42	United States Tahoe National Forest	—	Fowler Spring	NW	NW	5	16N	10E	MD	1,300 gpd	May 1-Oct 1	Stockwatering and fire protection	L-2888
10440	5/6/42	United States Tahoe National Forest	—	Quaker Hill Spring	NW	SW	7	16N	10E	MD	1,300 gpd	May 1-Oct 1	Stockwatering and fire protection	L-2889
10446	5/6/42	United States Tahoe National Forest	—	Thimbleberry Creek	NW	SW	3	17N	10E	MD	6,500 gpd	May 15-Oct 15	Stockwatering and fire protection	L-2891
10447	5/6/42	United States Tahoe National Forest	—	Junction House Spring	SW	SW	24	17N	10E	MD	7,100 gpd	May 1-Oct 15	Stockwatering and fire protection	L-2892
10448	5/6/42	United States Tahoe National Forest	—	Grouse Ridge Spring No. 3	SW	NE	6	17N	12E	MD	1,950 gpd	June 1-Nov 30	Domestic, stockwatering, and fire protection	L-4895
10449	5/6/42	United States Tahoe National Forest	—	Magonigal Spring	NW	NW	6	17N	14E	MD	350 gpd	June 1-Nov 1	Domestic and stockwatering	L-3057
10451	5/6/42	United States Tahoe National Forest	—	Bear Trap Creek	SW	NW	25	18N	9E	MD	7,100 gpd	May 1-Oct 1	Stockwatering and fire protection	L-2894
10452	5/6/42	United States Tahoe National Forest	—	Grouse Ridge Spring No. 1	NW	NE	34	18N	12E	MD	350 gpd	Jun 1-Nov 30	Domestic and stockwatering	L-3058
10453	5/6/42	United States Tahoe National Forest	—	Grouse Ridge Spring No. 2	NW	SW	34	18N	12E	MD	1,200 gpd	Jun 1-Nov 1	Domestic, stockwatering, and fire protection	L-3921
10494	7/15/42	United States Tahoe National Forest	—	Dogwood Spring	SE	SW	3	16N	10E	MD	1,950 gpd	Jun 1-Dec 1	Stockwatering and fire protection	L-4265
10496	7/15/42	United States Tahoe National Forest	—	Mobley Homestead Spring No. 1	NE	NW	20	18N	10E	MD	1,950 gpd	May 1-Oct 1	Stockwatering and fire protection	L-2895

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YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
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Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
10497	7/15/42	United States Tahoe National Forest	—	Holden Spring	SW	SW	26	18N	9E	MD	10,000 gpd	May 1-Oct 1	Stockwatering and fire protection	L-2896
10498	7/15/42	United States Tahoe National Forest	—	Buckeye Spring	SE	NW	16	16N	10E	MD	1,950 gpd	May 1-Oct 15	Stockwatering and fire protection	L-2897
10500	7/15/42	United States Tahoe National Forest	—	Spring tributary to Bloody Run Creek	SE	NE	30	18N	10E	MD	2,160 gpd	Apr 1-Dec 31	Stockwatering and fire protection	L-2898
10501	7/15/42	United States Tahoe National Forest	—	Sardine Springs	SE	NW	29	17N	11E	MD	200 gpd	May 1-Nov 1	Stockwatering and domestic	L-4892
10502	7/15/42	United States Tahoe National Forest	—	Mobley Homestead Spring No. 2	NE	NW	20	18N	10E	MD	6,800 gpd	May 1-Oct 1	Stockwatering and fire protection	L-2899
10503	7/15/42	United States Tahoe National Forest	—	Indian Spring	NE	SE	26	17N	10E	MD	8,000 gpd	May 1-Oct 15	Domestic and fire protection	L-6100
10504	7/15/42	United States Tahoe National Forest	—	Mule Springs	SW	SE	13	16N	10E	MD	16,000 gpd	May 1-Nov 30	Stockwatering and fire protection	L-4977
10505	7/15/42	United States Tahoe National Forest	—	Jackies Orchard Spring	SW	SW	27	18N	9E	MD	1,950 gpd	May 1-Oct 1	Stockwatering and fire protection	L-2901
10506	7/15/42	United States Tahoe National Forest	—	Upper Woolsey Spring	SW	NW	21	18N	10E	MD	1,950 gpd	May 1-Oct 1	Stockwatering and fire protection	L-2902
10543	10/3/42	Forest Community Club	—	South Fork of Oregon Creek	NE	NW	27	19N	10E	MD	30,000 gpd 0.25 af	Jan 1-Dec 31	Mining	L-3064
10615	3/17/43	C. R. and M. L. Milham	14N/8E-5J2	Wolf Creek	NE	SE	5	14N	8E	MD	0.50 cfs	May 1-Nov 1	Irrigation, 35 acres	L-3074
10634	5/1/43	United States Tahoe National Forest	—	Hall's Ranch Spring	SW	NE	4	19N	9E	MD	1,950 gpd	Jan 1-Dec 31	Stockwatering and fire protection	L-2903
10637	5/1/43	United States Tahoe National Forest	—	Wild Plum Spring	NW	SW	26	20N	12E	MD	1,950 gpd	Jan 1-Dec 31	Domestic and fire protection	L-2905
10639	5/1/43	United States Tahoe National Forest	—	Deadwood Spring	SW	NW	21	21N	10E	MD	1,950 gpd	Apr 1-Dec 15	Stockwatering, fire protection, and recreation	L-2907
10640	5/1/43	United States Tahoe National Forest	—	Gold Lake Spring	NE	NW	22	21N	12E	MD	1,950 gpd	Jan 1-Dec 31	Domestic and fire protection	L-2908
10642	5/1/43	United States Tahoe National Forest	—	Saddleback Spring	NW	SE	33	21N	10E	MD	1,950 gpd	Apr 1-Dec 1	Domestic and fire protection	L-2910
10692	8/7/43	Cal Ida Lumber Company	19N/9E-6A1 19N/9E-6P1	Cherokee Creek Cherokee Creek	NE S½ Lot 9	NE SW	6 6	19N 19N	9E 9E	MD MD	2.00 cfs	Jan 1-Dec 31	Industrial and fire protection	L-3080
10716	10/5/43	Cal Ida Lumber Company	—	Spring tributary to Cherokee Creek	S½ Lot 6		7	19N	9E	MD	7,000 gpd	Jan 1-Dec 31	Domestic	L-3002
10747	1/5/44	A. T. Merian	—	Spring tributary to Slate Creek	SW	SE	19	21N	9E	MD	14,400 gpd	May 1-Oct 1	Domestic and irrigation, 1 acre	L-3194
10751	1/18/44	Martin A. and Cleo B. Maier and Elmer A. and Mattie Van Dyke Johnson	12N/7E-19A1	Tributary to Auburn Ravine	NE	NE	19	12N	7E	MD	0.2 cfs 4.5 af	Apr 1-Nov 1 Apr 1-Nov 1	Stockwatering and irrigation, 17 acres	L-3966
10839	7/13/44	Tommy Bartsch	18N/8E-20Q1	Wagner Creek	SE	SW	20	18N	8E	MD	0.04 cfs	Jul 1-Sept 15	Domestic and irrigation, 3 acres	L-3431
10854	7/28/44	F. N. Farnsworth	18N/8E-33M1	Clear Creek	NW	SW	33	18N	8E	MD	0.62 cfs	Jan 1-Dec 31	Power, domestic, and irrigation, 10 acres	P-6321
10856	8/1/44	W. R. Ellsworth	19N/9E-8L1	Piddle Creek	SE	SW	8	19N	9E	MD	3.00 cfs	Nov 1-May 31	Mining, domestic, industrial, and irrigation, 5 acres	L-3299
10980	2/13/45	Francis J. and Ruth Bartsch	18N/8E-20Q1	Moonshine Creek	SE	SW	20	18N	8E	MD	0.035 cfs	Apr 1-Dec 1	Irrigation, 5 acres	L-3171

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					1/4	1/4	Sec.	Tp.	R.	B. & M.				
10984	2/15/45	William Geerts	--	Tributary to North Yuba River	SW	NW	17	19N	9E	MD	7,000 gpd	Jan 1-Dec 31	Domestic	L-3087
11106	7/13/45	C. F. and J. K. Heilman	19N/11E-6F1	Van Joan Creek	Lot 3	NW	6	19N	11E	MD	0.05 cfs	May 1-Nov 15	Domestic and fire protection	L-4849
11120	7/27/45	Albert Andereon	20N/12E-22R1	Spring tributary to North Yuba River	NW	NE	27	20N	12E	MD	16,000 gpd	Apr 1-Dec 1	Domestic, stockwatering, and fire protection	L-3392
11257	1/10/46	L. R. and W. Loffmark	--	Spring tributary to Goodyear Creek	SE	SE	32	20N	10E	MD	3,800 gpd	Jan 1-Dec 31	Domestic	L-3342
11258	1/10/46	Marvey W. Smith	11N/7E-27M1	Tributary to Minere Ravine	NW	SW	27	11N	7E	MD	10 af	Oct 1-May 1	Domestic, stockwetering, and irrigation, 60 acres	P-6528
			--	Tributary to Miners Ravine	Movable diversion point within W½	SW	27	11N	7E	MD	0.75 cfs	Mar 1-Nov 1		
11355	3/28/46	W. S. and T. Turner	--	Jim Crow Canyon	NW	NE	6	19N	11E	MD	500 gpd	Jan 1-Dec 31	Domestic	L-3358
11382	4/23/46	United States Tahoe National Forest	--	Red Mountain Spring No. 1	SW	SW	18	17N	13E	MD	0.003 cfs	Apr 1-Nov 1	Domestic, stockwatering, and fire protection	P-6627
11440	6/17/46	Dallas Poston	--	Excelsior Ravine	NE	SW	14	20N	10E	MD	2.50 cfs	Jan 1-Dec 31	Mining	L-3251
11501	8/7/46	Albert Anderson	20N/12E-22R1	Spring tributary to North Yuba River	NW	NE	27	20N	12E	MD	0.125 cfs	May 1-Oct 1	Irrigation, 30 acres	L-3393
11565	9/23/46	Basil T. Rogere	11N/8E-6H1	Miners Ravine	SE	NE	6	11N	8E	MD	0.05 cfs	May 1-Oct 15	Stockwatering and irrigation, 4 acres	L-3597
11567	9/27/46	A. B. and Dorothy M. Reading	--	Springs tributary to Antelope Creek	NE	SW	27	12N	7E	MD	0.05 cfs	Jan 1-Dec 31	Domestic and irrigation, 3 acres	P-6750
11596	10/28/46	Frank Carmichael	17N/6E-4H1	Dry Creek	SE	NE	4	17N	6E	MD	16.0 cfs	May 1-Dec 1	Irrigation, 1,100 acres	L-4699
			--	Dry Creek	SE	NE	13	17N	4E	MD				
11718	2/5/47	Harry P. Mulock	19N/7E-17F1	Coeta Creek	SE	NW	17	19N	7E	MD	7,200 gpd	Dec 1-Feb 1	Domestic	L-3371
11721	2/7/47	Catherine Sullivan and Fred W. Cook	--	Tributary to North Yuba River	SE	SW	31	21N	13E	MD	6,000 gpd	Jan 1-Dec 31	Domestic	L-3632
11994	7/16/47	Joseph P. Bachele	20N/10E-32L1	Spring tributary to Goodyear Creek	NW	SW	5	19N	10E	MD	1,400 gpd	Jan 1-Dec 31	Domestic	L-3526
12040	8/13/47	Pat Walters and Howard A. and Tillie E. Grebin	12N/7E-20B1	Grapevine Ravine	NW	NE	20	12N	7E	MD	18 af	Oct 15-May 15	Stockwatering and irrigation, 12 acres	L-4445
12054	8/21/47	C. and C. T. Noller	--	Bear Creek	SE	SW	28	19N	11E	MD	1.0 cfs	Apr 1-Jul 15	Mining and domestic	L-3979
12104	9/24/47	United States Tahoe National Forest	--	Haskell Creek	SE	NE	31	21N	13E	MD	0.015 cfs	May 1-Oct 15	Domestic	P-7107
12105	9/24/47	United States Tahoe National Forest	--	Gleason Spring	SE	SW	19	19N	10E	MD	100 gpd	May 15-Nov 1	Domestic, stockwatering, and fire protection	L-4210
12108	9/24/47	United States Tahoe National Forest	--	Carvin Creek	SW	SE	36	21N	12E	MD	5,400 gpd	Jan 1-Dec 31	Domestic and fire protection	P-7198
			--	Spring tributary to North Yuba River	NW	SW	1	20N	12E	MD				
			--	Carvin Creek	NE	NW	1	20N	12E	MD				
12109	9/24/47	United States Tahoe National Forest	--	Nigger Canyon tributary to North Yuba River	SE	SE	12	19N	11E	MD	60 gpd	Jun 15-Nov 15	Domestic	L-3989
12118	10/3/47	James M. Stevens	17N/5E-34K1	Little Dry Creek	NW	SE	34	17N	5E	MD	15 af	Nov 1-Apr 15	Irrigation, 20 acres	L-3884
12148	11/3/47	Donner Summit Public Utility District	--	Spring tributary to Lake Van Norden	NE	NE	36	17N	14E	MD	12,000 gpd	Jan 1-Dec 31	Domestic and fire protection	L-3821
			--	Spring tributary to Lake Van Norden	NE	NE	36	17N	14E	MD	6,000 gpd	Jan 1-Dec 31		

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TABLE C-1 (Continued)

APPLICATIONS TO APPROPRIATE WATER IN YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

(Filed with State Water Rights Board as of May 29, 1959)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
12154	11/14/47	C. C. French and Sam I. Turnell	16N/5E-10B1	Little Dry Creek	NW	NE	10	16N	5E	MD	0.45 cfs 19.5 af	Apr 1-Oct 31	Stockwatering and irrigation, 35 acres	P-7067
12313	2/10/48	C. W. and E. W. Nauman	—	Spring tributary to Deer Creek	SE	SE	35	17N	9E	MD	0.01 cfs	Mar 1-Dec 1	Domestic, fire protection, and irrigation	P-7336
12455	3/31/48	F. Comrie	11N/7E-16H1	Secret Ravine	NE	SE	16	11N	7E	MD	0.31 cfs	May 15-Oct 15	Domestic, stockwatering, and irrigation, 40 acres	L-3690
12488	4/28/48	Barbara M. and Paul A. Kneebone	—	Spring tributary to Clipper Ravine	NW	NE	8	13N	9E	MD	1,400 gpd	Jan 1-Dec 31	Domestic and stockwatering	L-4848
12532	6/3/48	County of Yuba and Yuba County Water District	— — —	New York Creek tributary to Dry Creek Rediversion at Dry Creek	NW SE NW	NW NW SW	25 25 2	19N 19N 18N	6E 6E 6E	MD MD MD	12,000 af	Oct 1-Jul 1	Domestic and irrigation, 34,350 acres	P-11529
12546	6/14/48	George C. Roeding, Jr.	11N/7E-8G1	Antelope Creek	Movable diversion point between SW NW			SE SE	8 and 8	11N 11N	7E 7E	MD MD	0.11 cfs	Feb 1-May 31	Irrigation, 30 acres	L-5524
12573	6/29/48	County of Yuba and Yuba County Water District	— —	New York Creek tributary to Dry Creek Rediversion at Dry Creek	NW SE	NW NW	25 25	19N 19N	6E 6E	MD MD	12,000 af	Oct 1-Jul 1	Power	P-11530
12700	9/15/48	N. C. and L. E. Richardson	16N/7E-4E1	Tributary to Yuba River	SW	NW	4	16N	7E	MD	25 af	Oct 1-May 1	Irrigation, 20 acres	L-3719
12734	10/7/48	United States Tahoe National Forest	— — — — — —	Spring tributary to South Yuba River Spring tributary to South Yuba River Spring tributary to South Yuba River Spring tributary to South Yuba River Spring tributary to South Yuba River Spring tributary to South Yuba River	NW NW NW NW NW SE	NE NE NE NE NE SW	28 28 28 28 28 28	17N 17N 17N 17N 17N 17N	13E 13E 13E 13E 13E 13E	MD MD MD MD MD MD	16,000 gpd	Jan 1-Dec 31	Domestic and stockwatering	L-4944
12746	10/13/48	County of Placer	— —	Rattlesnake Creek South Yuba River	NE NE	SW NW	20 25	17N 17N	13E 13E	MD MD	100 cfs 20,000 af 200 cfs 25,000 af	Jan 1-Dec 31 Jan 1-Dec 31	Domestic, stockwatering, and irrigation, 11,000 acres	Pending
12747	10/13/48	County of Placer	— —	Rattlesnake Creek South Yuba River	NE NE	SW NW	20 25	17N 17N	13E 13E	MD MD	100 cfs 20,000 af 200 cfs 25,000 af	Jan 1-Dec 31 Jan 1-Dec 31	Municipal	Pending
12748	10/13/48	County of Placer	— —	Rattlesnake Creek South Yuba River	NE NE	SW NW	20 25	17N 17N	13E 13E	MD MD	100 cfs 20,000 af 200 cfs 25,000 af	Jan 1-Dec 31 Jan 1-Dec 31	Power	Pending
12898	1/12/49	F. T. and E. T. Clarke	—	Spring tributary to Little Slate Creek	NE	NW	30	22N	10E	MD	200 gpd	June 1-Oct 1	Domestic and fire protection	L-3806
12909	1/24/49	J. S. and R. M. Thomas	—	Van Joan Canyon tributary to North Yuba River	Lot 3		6	19N	11E	MD	500 gpd	May 1-Nov 1	Domestic	L-4842
12944	2/21/49	Paul and Elizabeth Ripley	12N/7E-23F1	Dutch Ravine	SE	NW	23	12N	7E	MD	0.25 cfs	May 1-Nov 1	Irrigation, 25 acres	L-4189
13055	4/29/49	Blanche N. Stark	—	Spring tributary to Miners Ravine	NE	NW	26	11N	7E	MD	400 gpd	Jan 1-Dec 31	Stockwatering	L-4454
13075	5/6/49	Ervin O. and Polly Pekuri	—	Secret Ravine	NE	SW	20	11N	7E	MD	0.05 cfs	May 1-Sept 30	Domestic, stockwatering, and irrigation, 2.5 acres	L-3460
13080	5/9/49	Carroll A. Leason	—	Miners Ravine	Lot 2		2	10N	7E	MD	1.0 cfs	Jan 1-Dec 31	Stockwatering and irrigation, 80 acres	P-7786
13130	6/2/49	Browns Valley Irrigation District	—	Dry Creek	NW	NW	21	17N	6E	MD	20,000 af	Oct 1-May 1	Domestic and irrigation, 11,000 acres	P-8649
13286	8/9/49	A. T. Merian	—	Spring tributary to Slate Creek	SW	SE	19	21N	9E	MD	0.056 cfs	May 1-Oct 1	Domestic and irrigation, 7 acres	P-7927

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APPLICATIONS TO APPROPRIATE WATER IN YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

(Filed with State Water Rights Board as of May 29, 1959)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status[a]
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
13297	8/16/49	Frank D. Poggi	--	Tributary to Goodyear Creek	SE	NW	21	20N	10E	MD	400 gpd	May 1-Oct 31	Domestic and fire protection	L-4043
13325	9/1/49	E. and E. Becky	--	Spring tributary to Brandy Creek	NE	NW	34	19N	8E	MD	800 gpd	Jan 1-Dec 31	Domestic and fire protection	L-4272
13327	9/2/49	Joseph Hamilton Estats	--	Spring tributary to Goodyear Creek	NE	NE	29	20N	10E	MD	0.025 cfs	Jan 1-Dec 31	Domestic and fire protection	P-8064
13394	10/11/49	Ralph B. Aitken	--	Antelope Creek	SW	NW	20	11N	7E	MD	25 af	Dec 1-Jul 1	Irrigation, 67 acres	L-4781
13399	10/13/49	Marin Council Boy Scouts of America	17N/12E-22G1	Chubb Lake tributary to Lake Spaulding	SW	NE	22	17N	12E	MD	42.5 af	Jan 1-May 15	Recreation	L-3796
13419	10/26/49	J. A. Bsek	11N/7E-35A1	Minsre Ravine	NE	NE	35	11N	7E	MD	0.3 cfs 56 af	Apr 15-Oct 15	Recreation and irrigation, 40 acres	L-5430
13542	1/18/50	W. O. and Bertha Byers	12N/6E-12K1	Tributary to Auburn Ravine	NW	SE	12	12N	6E	MD	0.2 cfs	Apr 15-Nov 15	Stockwatering and irrigation, 30 acres	L-4134
13626	3/10/50	United States Tahoe National Forest	--	Grassy Lake Creek	SW	SW	33	21N	12E	MD	17,500 gpd	Jun 1-Oct 31	Domestic and recreation	P-8115
13627	3/10/50	United States Tahoe National Forest	--	Organ Creek	NE	SE	8	20N	13E	MD	50,000 gpd	Jun 15-Aug 1	Recreation, domestic, and fire protection	L-4873
13656	3/28/50	E. S. and C. E. Matthews	--	Tributary to Golden Gate Ravine	NW	SW	17	19N	7E	MD	1,445 gpd	Jan 1-Dec 1	Domestic	L-5234
13689	4/14/50	Mabel Delaney and Frank B. Delaney	--	Tributary to North Yuba River	SW	NE	10	20N	13E	MD	0.145 cfs 0.40 af	May 15-Nov 1	Fish culture	L-3836
13718	5/3/50	O'Farrell Welch	11N/7E-23J1	Tributary to Minsre Ravine	NE	SE	23	11N	7E	MD	10 af	Oct 15-Apr 15	Stockwatering and irrigation, 40 acres	L-4471
13727	5/10/50	Earl J. and Elizabeth Aydelotte	--	Tributary to Secret Ravine	NW	SW	20	11N	7E	MD	9,700 gpd	Jan 1-Dec 31	Stockwatering and irrigation, 6 acres	L-5498
13740	5/15/50	Walter S. and Annie E. Griffing	12N/6E-12C1	Tributary to Markham Ravine	NE	NW	12	12N	6E	MD	0.075 cfs 1.15 af	Apr 1-Oct 31	Irrigation, 40 acres	L-5312
13839	7/6/50	Harold E. Wantech and Thomas J. Kelly	11N/7E-34H1	Tributary to Minsre Ravine	SE	NE	34	11N	7E	MD	38 af	Nov 1-Apr 30	Recreation and irrigation 70 acres	L-5452
13849	7/17/50	T. E. Allen	--	Tributary to Auburn Ravine	SW	SE	19	12N	7E	MD	0.2 cfs	Apr 1-Oct 1	Domestic and irrigation, 15 acres	L-5518
			12N/7E-19P1	Tributary to Auburn Ravine	SE	SW	19	12N	7E	MD	3.25 af	Apr 1-Oct 1		
13867	7/26/50	Johnson Ranche County Water District	--	Dry Creek	Diversion point to be located between								Domestic and irrigation, 12,000 acres	Pending
					NE	NE	13	14N	5E	MD	25 cfs	Jun 1-Oct 1		
					and									
					NE	SW	11	13N	4E	MD				
			--	Best Slough	Diversion point to be located between									
					NW	SE	12	14N	5E	MD				
					and									
					NE	SE	25	14N	4E	MD				
			--	Yuba River	SE	NW	33	15N	6E	MD	35,000 af	Oct 1-Jun 1		
13870	7/27/50	State of California Division of Forestry	--	Spring tributary to Grizzly Creek	SW	SE	28	18N	9E	MD	5,000 gpd	Jun 1-Nov 1	Domestic and fire protection	L-4804
13873	7/31/50	Browns Valley Irrigation District	--	Dry Creek	NW	NW	21	17N	6E	MD	40,000 af	Oct 1-Jun 1	Domestic and irrigation, 9,000 acres	P-9703
13956	9/20/50	Yuba County Water District and Oroville-Wyandotte Irrigation District	--	Slate Creek	SE	NE	1	20N	8E	MD	35,000 af	Jan 1-Jul 1	Power and Domestic	P-11515
			--	Slate Creek	SE	SW	2	20N	8E	MD	300 cfs	Jan 1-Dec 31		
13957	9/20/50	Yuba County Water District and Oroville-Wyandotte Irrigation District	--	Slate Creek	SE	NE	1	20N	8E	MD	35,000 af	Jan 1-Jul 1	Domestic and irrigation, 65,350 acres	P-11516
			--	Slate Creek	SE	SW	2	20N	8E	MD	300 cfs	May 1-Nov 1		

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TABLE C-1 (Continued)

APPLICATIONS TO APPROPRIATE WATER IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
(Filed with State Water Rights Board as of May 29, 1959)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
14057	11/15/50	P. B. and C. Illerich	--	Tributary to Lake Van Norden watershed	NE	SE	17	17N	15E	MD	200 gpd	Jan 1-Dec 31	Domestic	L-4904
14125	1/12/51	Clive B. Nubbell	--	Spring tributary to Ory Creek	SW	NW	29	19N	7E	MD	750 gpd	Jan 1-Dec 31	Domestic	L-4874
14179	3/7/51	C. J. Rolph, Jr.	15N/9E-21M1	Tributary to Bear River	SW	SW	21	15N	9E	MD	21.3 af	Oct 15-Apr 15	Stockwatering and irrigation, 9.5 acres	L-4076
14229	4/5/51	California Province of The Society of Jesus	--	Tributary to Clipper Creek	NW	NE	9	13N	9E	MD	100 af	Oct 1-Apr 30	Domestic, recreation, fire protection, and irrigation, 20 acres	P-8620
14244	4/10/51	June I. Maxwell, J. and G. Kohlee, and J. S. and B. J. Makimoto	11N/7E-12C1 --	Tributary to Secret Ravine Tributary to Secret Ravine	NE NW	NW NW	12 12	11N 11N	7E 7E	MD MD	0.38 cfs	Apr 1-Oct 31	Stockwatering and irrigation, 30 acres	L-4648
14264	4/23/51	James E. and Elsie W. Webb	13N/8E-34F1	Rock Creek	SE	NW	34	13N	8E	MD	0.05 cfs	Jan 1-Dec 31	Domestic, stockwatering, and irrigation, 5 acres	P-9239
14265	4/23/51	Raymond and Stanley Woodward	--	Rock Creek	SE	NW	34	13N	8E	MD	0.05 cfs	Jan 1-Dec 31	Domestic, stockwatering, and irrigation, 6 acres	P-9240
14266	4/23/51	Alvin W. Museo	13N/8E-34H1	Tributary to Rock Creek	SE	NE	34	13N	8E	MD	0.375 cfs	May 1-Oct 1	Domestic, stockwatering, and irrigation, 40 acres	P-9241
14274	4/30/51	E. J. and A. M. Kohler	--	Marion Creek tributary to Oregon Creek	NE	NE	32	19N	9E	MD	0.5 af	Nov 1-May 31	Domestic, stockwatering, fish culture, and irrigation, 80 acres	P-9159
14328	5/29/51	Antonio and Frances Montero	11N/7E-17C1	Antelope Creek	NE	NW	17	11N	7E	MD	0.11 cfs	Mar 15-Oct 1	Irrigation, 9 acres	L-5017
14352	6/20/51	Loudon B. Mullin	--	Spring tributary to Spring Creek	NE	SW	34	18N	9E	MD	0.10 cfs	Jan 1-Dec 31	Mining and domestic	P-8777
14363	6/25/51	Thomas J. P. Shannon	--	Cold Springs Creek tributary to Blue Ravine	SW	SW	6	18N	10E	MD	2.5 cfs	Jun 1-Oct 1	Mining and domestic	L-4971
14367	6/27/51	United States Tahoe National Forest	--	Lone Grave Spring	SW	SE	25	17N	9E	MD	25 gpd	Apr 1-Nov 30	Domestic	L-4943
14368	6/27/51	United States Tahoe National Forest	--	Independence Ravine	NE	SE	30	20N	12E	MD	300 gpd	Jun 1-Nov 1	Domestic	L-4981
14369	6/27/51	United States Tahoe National Forest	--	Piddle Creek	SE	SW	8	19N	9E	MD	2,750 gpd	May 1-Nov 1	Domestic	L-5423
14370	6/27/51	Lloyd E. and Rae A. Dixon	--	Dirty Face Ravine	NE	SE	29	12N	8E	MD	0.07 cfs	Jan 1-Dec 31	Stockwatering and irrigation, 3 acres	L-5229
14371	6/27/51	Sidney V. Smith	16N/6E-7L1	French Dry Creek	NE	SW	7	16N	6E	MD	6.0 cfs	Apr 1-Nov 30	Irrigation, 422.4 acres	P-9978
14389	7/12/51	Don L. and Lillian D. Castle	13N/8E-26F1	Tributary to South Fork Dry Creek	SE	NW	26	13N	8E	MD	0.16 cfs	Apr 15-Nov 1	Stockwatering and irrigation, 15 acres	L-5584
14399	7/19/51	United States Tahoe National Forest	--	Rattlesnake Creek	SE	SE	16	17N	13E	MD	7,000 gpd	Jun 1-Sept 1	Domestic	L-5114
14400	7/19/51	United States Tahoe National Forest	--	Jackson Creek	SE	NW	2	18N	12E	MD	0.01 cfs	Apr 1-Nov 30	Domestic	P-8830
14410	7/30/51	R. E. and Ruby Horton	11N/7E-10P1	Secret Ravine	SE	SW	10	11N	7E	MD	0.06 cfs	May 1-Oct 1	Irrigation, 1.5 acres	L-5598
14439	8/23/51	Henry Teichert	12N/7E-17K1	Tributary to Grapevine Ravine	NE	SW	17	12N	7E	MD	3 af	Oct 15-May 15	Fish culture and irrigation, 3 acres	L-4857
14525	10/16/51	J. A. Beek	11N/7E-35K1 --	Miners Ravine Tributary to Miners Ravine	NW SE	SE SE	35 35	11N 11N	7E 7E	MD MD	0.1 cfs 18 af	May 1-Oct 15 Oct 15-May 1	Recreation and irrigation, 90 acres	L-5431

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APPLICATIONS TO APPROPRIATE WATER IN YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

(Filed with State Water Rights Board as of May 29, 1959)

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					1/4	1/4	Sec.	Tp.	R.	B. & M.				
14545	11/1/51	Elmer A. and Mattie Van Dyke Johnson	—	Tributary to Auburn Ravine	SW	NW	20	12N	7E	MD	0.05 cfs 6 af	Jun 1-Sept 30 Nov 1-Jun 1	Irrigation, 47 acres	L-5160
14572	11/7/51	County of Yuba and Yuba County Water District	— — — — — —	Canyon Creek Rediversion at Slate Creek Rediversion at Lost Creek Rediversion at Golden Gate Creek Rediversion at New York Creek Rediversion at Dry Creek	NW NW NW NE NW SE	SE SW SE SW NW NW	10 1 24 18 25 25	20N 20N 20N 19N 19N 19N	9E 8E 7E 7E 6E 6E	MD MD MD MD MD MD	40,000 af	Oct 1-Jun 30	Domestic and irrigation, 34,350 acres	P-11531
14620	1/15/52	Tony Aguilar	—	Tributary to Antelope Creek	SE	NW	34	12N	7E	MD	10 af	Oct 1-Jun 1	Irrigation, 78 acres	P-9007
14658	1/29/52	Best Mines, inc.	19N/10E-18J1	Water Box Ravine tributary to Woodruff Creek	SE	NE	18	19N	10E	MD	3.00 cfs	Jan 1-Dec 31	Mining, domestic, and fire protection	P-9595
14700	3/6/52	Nevada Irrigation District	— —	Haypress Creek Haypress Creek	SW SW	NW NE	32 4	20N 19N	13E 13E	MD MD	230 cfs 75,000 af	Oct 1-Jul 15	Power	Pending
14701	3/6/52	Nevada Irrigation District	— —	Haypress Creek Haypress Creek	SW SW	NW NE	32 4	20N 19N	13E 13E	MD MD	230 cfs 75,000 af	Apr 15-Jul 15 Oct 1-Jul 15	Irrigation	Pending
14705	3/6/52	Nevada Irrigation District	— —	Coon Creek Coon Creek	NE NE	NW SE	17 12	13N 13N	7E 6E	MD MD	20,500 af	Nov 1-Apr 1	Irrigation	Pending
14742	4/7/52	County of Tuba and Yuba County Water District	— — — — — —	Canyon Creek Rediversion at Slate Creek Rediversion at Lost Creek Rediversion at Golden Gate Creek Rediversion at New York Creek Rediversion at Dry Creek	NW NW NW NE NW SE	SE SW SE SW NW NW	10 1 24 18 25 25	20N 20N 20N 19N 19N 19N	9E 8E 7E 7E 6E 6E	MD MD MD MD MD MD	90,000 af	Oct 1-Jun 30	Power	P-11563
14773	4/23/52	V. S. and Edna Jaquith and B. J.Haffey	14N/9E-4G1 — —	Tributary to Campbell Creek Tributary to Campbell Creek Campbell Creek	SW NE NE	NE NE NE	4 4 4	14N 14N 14N	9E 9E 9E	MD MD MD	0.25 cfs 1.5 af 0.25 cfs 24 af 15.0 af	Mar 1-Nov 1 Nov 1-Mar 1 Mar 1-Nov 1 Nov 1-Mar 1 Nov 1-Mar 1	Stockwatering and irrigation, 81 acres	P-9106
14804	5/12/52	South Sutter Water District	—	Bear River	NE	SW	21	14N	6E	MD	360 cfs 95,000 af	Jan 1-Dec 31 Oct 1-Jul 1	Domestic and irrigation, 59,000 acres	P-11297
14884	7/1/52	Manuel Arthur Perry, Jr.	13N/7E-33E1	Tributary to Doty Ravine	SW	NW	33	13N	7E	MD	12 af	Oct 15-Jun 1	Irrigation, 16 acres	P-9127
14896	7/8/52	Malcomb R. Hill, M. D.	16N/7E-23N1	Nigger Creek	SW	SW	23	16N	7E	MD	10.0 af	Dec 1-Mar 1	Irrigation, 23 acres	L-4969
14914	7/17/52	A. and B. P. Donald and N. T. and S. W. Malbrook	—	Nigger Creek	NE	SE	34	20N	11E	MD	1.45 cfs	Apr 1-Oct 1	Mining and domestic	L-5225
14918	7/21/52	Joseph G. and Blanche Brown	19N/9E-21L1 19N/9E-29A1 19N/9E-20N1	East Fork Indian Creek South Fork Indian Creek Grant's Ravine	NE SE SW	SW SE SW	21 20 20	19N 19N 19N	9E 9E 9E	MD MD MD	3.0 cfs 7.0 cfs 5.0 cfs	Apr 1-Jul 31 Apr 1-Jul 31 Apr 1-Jul 31	Mining	P-9566
14930	7/28/52	United States Tahoe National Forest	—	Lytton Creek	NW	SE	24	17N	14E	MD	15,000 gpd	Jan 1-Dec 31	Domestic and fire protection	L-5083
14946	7/31/52	James N. Stevens	17N/5E-34K1	Little Dry Creek	NW	SE	34	17N	5E	MD	11.0 af	Sept 1-Apr 15	Stockwatering and irrigation, 38 acres	L-5084
14951	8/6/52	John W., Loyd, T. M. and Harold J. Sperbeck and Ann Benton	16N/6E-7L1	Dry Creek	NE	SW	7	16N	6E	MD	0.625 cfs	Apr 15-Oct 15	Stockwatering and irrigation, 50 acres	P-10084
14959	8/12/52	A. E. and E. S. Flint	—	Spring tributary to South Yuba River	SW	NW	25	17N	13E	MD	650 gpd	May 1-Dec 1	Domestic and fire protection	P-9301
14960	8/12/52	W. C. and N. N. Lowe	—	Spring tributary to South Yuba River	SW	NW	25	17N	13E	MD	650 gpd	May 1-Dec 1	Domestic and fire protection	P-9302
14961	8/12/52	W. and S. M. Dinsmore	—	Spring tributary to South Yuba River	SW	NW	25	17N	13E	MD	650 gpd	May 1-Dec 1	Domestic and fire protection	P-9303

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TABLE C-1 (Continued)

APPLICATIONS TO APPROPRIATE WATER IN YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

(Filed with State Water Rights Board as of May 29, 1959)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
14962	8/12/52	Anne M. Doherty	--	Spring tributary to South Yuba River	SW	NW	25	17N	13E	MD	650 gpd	Jun 15-Oct 1	Domestic and fire protection	L-5295
14987	8/21/52	County of Yuba and Yuba County Water District	--	Canyon Creek	NW	SE	10	20N	9E	MD	50,000 af	Oct 1-Jul 1	Domestic and irrigation, 34,350 acres	P-11532
			--	Rediversion at Slate Creek	NW	SW	1	20N	8E	MD				
			--	Rediversion at Lost Creek	NW	SE	24	20N	7E	MD				
			--	Rediversion at Golden Gate Creek	NE	SW	18	19N	7E	MD				
			--	Rediversion at New York Creek	NW	NW	25	19N	6E	MD				
			--	Rediversion at Dry Creek	SE	NW	25	19N	6E	MD				
14989	8/21/52	Val M. and Elaine N. Jacobson	--	Tributary to Secret Ravine	SW	SE	20	11N	7E	MD	4,000 gpd	May 1-Oct 31	Irrigation, 0.5 acre	L-5668
14991	8/22/52	N. C. and L. E. Richardson	16N/7E-5H1	Tributary to Yuba River	NE	NE	5	16N	7E	MD	2.15 af	Oct 1-May 1	Domestic, stockwatering, fish culture, and irrigation, 1.5 acres	L-5305
15002	8/29/52	D. E. and V. M. Steger	--	Lathrop Ravine	NE	SE	19	17N	10E	MD	8.0 af	Feb 1-Jun 15	Domestic, stockwatering, and irrigation, 30 acres	P-9567
15043	10/7/52	Frank and Marguerite Nute	--	Tributary to Secret Ravine	NE	NE	21	11N	7E	MD	40 af	Nov 1-May 30	Irrigation, 32 acres	P-9282
15077	11/5/52	Harold E. Wentsch and Thomas J. Kelly	11N/7E-34H1	Tributary to Minere Ravine	SE	NE	34	11N	7E	MD	16 af	Nov 1-May 30	Recreation and irrigation, 70 acres	L-5687
15100	12/1/52	N. L. and M. A. White	--	Tributary to North Yuba River	NE	SW	4	20N	13E	MD	4,600 gpd	Jan 1-Dec 31	Domestic	P-9828
15107	12/8/52	Clinton R. Lyles, Richard H. Eakins, John A. Lunford and Raleigh L. Howard	--	Tributary to Minere Ravine	SW	NW	18	11N	8E	MD	0.44 cfs	Jan 1-Dec 31	Stockwatering and irrigation, 35 acres	P-9785
15182	2/2/53	Herman H. and Mary E. Gastman	--	North Fork Dry Creek	NW	NW	14	13N	8E	MD	180 af	Nov 1-Apr 31	Irrigation, 40 acres	P-9426
15184	2/2/53	Clarence R. Black	15N/7E-25H1	Dry Creek	SE	NE	25	15N	7E	MD	0.25 cfs	Mar 15-Nov 15	Irrigation, 25 acres	L-5218
15204	2/20/53	County of Yuba	--	North Yuba River	SW	NW	24	18N	7E	MD	700 cfs	Mar 1-Nov 1	Domestic, flood control, and irrigation, 70,960 acres	Pending
			--	Yuba River	SW	SW	29	16N	5E	MD	246,000 af	Oct 1-Aug 1		
15205	2/20/53	County of Yuba	--	North Yuba River	SW	NW	24	18N	7E	MD	800 cfs	Jan 1-Dec 31	Power and flood control	Pending
			--	Rediversion at North Yuba River	SW	NW	25	18N	7E	MD	126,000 af	Oct 1-Aug 1		
			--	Rediversion at Yuba River	SE	SW	14	16N	6E	MD				
15246	3/19/53	Annett M. Haberman and Phillis Sine	--	Spring tributary to South Yuba River	NE	NE	29	17N	9E	MD	2,050 gpd	Jan 1-Dec 31	Domestic	L-4864
15282	4/7/53	Oliver P. Stewart	--	Indian Ravine	Lot 7		4	15N	8E	MD	15.0 af	Oct 15-Apr 15	Irrigation, 100 acres	L-4714
15290	4/13/53	Stanley J. and Betty R. Samson	13N/7E-36J1	Sailore Ravine	NE	SE	36	13N	7E	MD	0.07 cfs	May 1-Oct 1	Stockwatering and irrigation, 17 acres	L-5619
15298	4/17/53	Ralph E. Enzler	13N/8E-22E1	South Pork Dry Creek	SW	NW	22	13N	8E	MD	0.22 cfs	Apr 1-Oct 15	Irrigation, 15 acres	L-5660
15318	4/27/53	Ruben J. Ruhkala	11N/7E-20P1	Secret Ravine	SE	SW	20	11N	7E	MD	0.5 cfs	Apr 1-Nov 30	Irrigation, 41.6 acres	P-9557
15324	4/30/53	San Juan Gold Company	--	Humbug Creek	SW	SE	31	18N	10E	MD	20 cfs	Jan 1-Dec 31	Mining	P-11078
			--	West Branch Humbug Creek	NE	NW	6	17N	10E	MD	1,300 af	Jan 1-Dec 31		
			--	Malakoff Pit	SW	NW	1	17N	9E	MD				
			--	Bonnie Ravine	NW	NW	3	17N	9E	MD				
			--	Glennon Ravine	NE	SE	33	18N	9E	MD				
			--	Roberts Ravine	NW	SE	33	18N	9E	MD				
15338	5/12/53	Henry Teichert	12N/7E-17K1	Grapevine Ravine	NW	SE	17	12N	7E	MD	20 af	Oct 1-May 1	Recreation, fish culture, and irrigation, 4 acres	L-5071
15345	5/18/53	W. W. and T. Freeman	--	Spring tributary to South Yuba River	SW	NW	25	17N	13E	MD	120 gpd	May 1-Nov 1	Domestic	L-5185

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APPLICATIONS TO APPROPRIATE WATER IN YUBA-BEAR RIVERS HYDROGRAPHIC UNIT

(Filed with State Water Rights Board as of May 29, 1959)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
15383	6/18/53	Union Granite Company	---	Secret Ravine	SW	SW	20	11N	7E	MD	0.025 cfs	Jan 1-Dec 31	Mining	P-9559
15384	6/18/53	Union Granite Company	---	Secret Ravine	SW	SW	20	11N	7E	MD	0.31 cfs	Apr 1-Nov 30	Irrigation, 25 acres	P-9560
15415	7/16/53	O. K. and O. R. Wacker	---	Spring tributary to South Yuba River	SW	NW	25	17N	13E	MD	650 gpd	May 1-Dec 1	Domestic	P-9591
15432	7/27/53	E. J. and M. M. Dorney	---	Tributary to Kanaka Ravine	SW	NE	28	20N	11E	MD	3.0 cfs	Jan 1-Dec 31	Mining and domestic	P-9632
15433	7/27/53	E. J. and M. M. Dorney	---	Gold Point Ravine	NW	SE	28	20N	11E	MD	300 gpd	Jan 1-Dec 31	Domestic	P-9633
15524	9/3/53	Nevada Irrigation District	---	South Yuba River	NE	NW	26	17N	8E	MD	420 cfs	Jan 1-Dec 31	Power	Pending
15525	9/3/53	Nevada Irrigation District	---	South Yuba River	NW	SW	11	17N	10E	MD	320 cfs 9,800 af	Jan 1-Dec 31 Nov 1-July 1	Power	Pending
15537	9/14/53	Frank B. and Mabel Delaney	---	Springs tributary to North Yuba River	SW	NE	10	20N	13E	MD	0.6 af	May 1-Jun 15	Fish culture	L-5376
15549	9/23/53	Cecil and Soledad K. Black	11N/7E-15D1	Secret Ravine	NW	NW	15	11N	7E	MD	0.13 cfs	May 1-Oct 30	Stockwatering and irrigation, 9 acres	P-10071
15560	10/1/53	Johnson Rancho County Water District	--- --- --- --- ---	Yuba River Yuba River Yuba River North Yuba River Yuba River	SE SE SW SW SE	SW NW SW NW NW	14 25 29 14 33	16N 16N 16N 19N 15N	6E 5E 5E 8E 6E	MD MD MD MD MD	1,500 cfs 1,200 cfs 300 cfs 340,000 af 300,000 af	Mar 1-Nov 1 Mar 1-Nov 1 Mar 1-Nov 1 Oct 1-Aug 1 Oct 1-Aug 1	Domestic and irrigation, 150,000 acres	Pending
15563	10/2/53	County of Yuba	--- --- ---	North Yuba River Rediversion at North Yuba River Rediversion at Yuba River	SW SW SE	NW NW SW	24 25 14	18N 18N 16N	7E 7E 6E	MD MD MD	100 cfs 220,000 af	Jan 1-Dec 31 Oct 1-Aug 1	Power and flood control	Pending
15574	10/9/53	County of Yuba	-- --- --- --- --- ---	North Yuba River (for offstream storage at Waldo Reservoir) Yuba River (for underground storage) Yuba River Yuba River Yuba River Yuba River	SW SE SE SE SE SW	NW SW NW SW NW SW	24 14 25 14 25 29	18N 16N 16N 16N 16N 16N	7E 6E 5E 6E 5E 5E	MD MD MD MD MD MD	100,000 af 300,000 af 114,000 af 1,500 cfs 500 cfs 300 cfs	Oct 1-Aug 1 Oct 1-Aug 1 Oct 1-Aug 1 Mar 1-Nov 1 Mar 1-Nov 1 Mar 1-Nov 1	Domestic, flood control, and irrigation, 70,960 acres	Pending
15585	10/26/53	Johnson Rancho County Water District	--- ---	Middle Yuba River Rediversion at Yuba River	SE SE	NE SW	32 14	18N 16N	8E 6E	MD MD	180,000 af	Oct 1-Aug 1	Domestic and irrigation, 400,000 acres	Pending
15607	11/10/53	E. N. and C. J. Robbins	11N/8E-32D1	Boulder Creek tributary to Bear River	NW	NW	32	14N	8E	MD	0.25 cfs 40 af	Apr 15-Oct 15 Nov 1-May 15	Recreation, stockwatering, and irrigation, 108 acres	P-9697
15642	12/9/53	City of Grass Valley	---	Rock Creek	NE	NE	32	17N	9E	MD	12,500 af	Apr 1-Dec 1	Municipal and domestic	P-11459
15656	12/17/53	Johnson Rancho County Water District	--- ---	Yuba River Rediversion at tributary to Reeds Creek	Lot NW	2 NE	26 8	16N 15N	5E 5E	MD MD	500 cfs	Mar 1-Nov 1	Domestic and irrigation, 24,000 acres	Pending
15657	12/21/53	J. W. and Nellie E. Dieterich	12N/7E-23H1	Dutch Ravine	SW	NE	23	12N	7E	MD	0.18 cfs	Nov 1-May 15	Stockwatering and irrigation, 34 acres	P-10347
15700	1/25/54	Johnson Rancho County Water District	--- --- --- --- ---	Yuba River Middle Yuba River North Yuba River Middle Yuba River North Yuba River	SE NE SE NE SE	SW NE NW NE NW	14 32 18 32 18	16N 18N 19N 18N 19N	6E 8E 9E 8E 9E	MD MD MD MD MD	800 cfs 900 cfs 900 cfs 200,000 af 340,000 af	Jan 1-Dec 31 Jan 1-Dec 31 Jan 1-Dec 31 Oct 1-Aug 1 Oct 1-Aug 1	Power	Pending
15732	2/17/54	Paul N. Anderson	--- ---	South Fork Dry Creek South Fork Dry Creek	SE SW	NE NW	21 21	13N 13N	8E 8E	MD MD	2.58 cfs	Jan 1-Dec 31	Domestic and irrigation, 206 acres	P-11497
15822	4/7/54	Cal-Ida Lumber Company	---	Fiddle Creek	SE	SW	8	17N	9E	MD	2,300 gpd	Jan 1-Dec 31	Domestic and fire protection	L-5280
15843	4/21/54	M. K., C. R., and G. W. Maish	16N/ 7E-4Q1	Rapp Creek	NW	SE	4	16N	7E	MD	0.38 cfs	Apr 1-Jul 31	Irrigation, 30 acres	Pending

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TABLE C-1 (Continued)

APPLICATIONS TO APPROPRIATE WATER IN
YUBA-BEAR RIVERS HYDROGRAPHIC UNIT
(Filed with State Water Rights Board as of May 29, 1959)

Application Number	Date Filed	Present Owner	DWR Diversion Number	Source	Location of Point of Diversion						Amount	Period of Diversion	Purpose	Status*
					1/4	1/4	Sec.	Tp.	R.	B. & M.				
15873	5/14/54	Johnson Rancho County Water District	--	North Yuba River	SE	NW	25	18N	7E	MD	282,000 af	Oct 1-Aug 1	Domestic and irrigation, 150,000 acres	Pending
15879	5/19/54	C. H. and S. G. Robinson	14N/8E-17L1	Long Hollow tributary to Wolf Creek	NE	SW	17	14N	8E	MD	0.05 cfs	Apr 1-Oct 1	Irrigation, 5 acres	P-10532
15885	5/24/54	Frank Cardoza	--	French Corral Creek	SW	NW	26	17N	7E	MD	5,000 gpd	Mar 1-Nov 1	Domestic, stockwatering, and irrigation, 2.68 acres	P-10112
15910	6/14/54	Susie I. and W. F. Ross	11N/7E-17P1	Tributary to Secret Ravine	SE	SW	17	11N	7E	MD	0.5 cfs	May 1-Oct 31	Irrigation, 42 acres	P-10202
15930	6/25/54	Johnson Rancho County Water District	--	North Yuba River	SE	SW	14	16N	6E	MD	440,000 af	Oct 1-Aug 1	Power	Pending
15943	7/12/54	Kenneth C. Nauser	--	Tributary to Dads Gulch	NE	SW	22	19N	8E	MD	2 cfs	Jan 1-Dec 31	Mining and domestic	P-10155
15944	7/14/54	Johnson Rancho County Water District	-- -- -- --	Deer Creek Deer Creek Middle Yuba River North Yuba River	NW NW NE SW	SE SE NE NW	24 24 32 25	16N 16N 18N 18N	6E 6E 8E 7E	MD MD MD MD	200 cfs 50,000 af 60,000 af 158,000 af	Mar 1-Nov 1 Oct 1-Aug 1 Oct 1-Aug 1 Oct 1-Aug 1	Domestic and irrigation, 212,000 acres	Incomplete
15945	7/14/54	Johnson Rancho County Water District	-- -- --	Yuba River Middle Yuba River North Yuba River	SE NE SE	SW NE NW	14 32 25	16N 18N 18N	6E 8E 7E	MD MD MD	2,200 cfs 3,400 cfs 3,400 cfs 40,000 af	Jan 1-Dec 31 Jan 1-Dec 31 Jan 1-Dec 31 Oct 1-Aug 1	Power	Pending
15964	7/29/54	John C. and Louise Hines	--	Tributary to Little Greenhorn Creek	SE	SE	30	16N	9E	MD	0.13 cfs 4 af	Apr 1-Nov 1 Nov 1-Apr 1	Recreation, stockwatering, and irrigation, 10 acres	P-10090
15967	7/30/54	Lola Eldredge	--	Spring tributary to Deer Creek	NE	NW	17	16N	8E	MD	4,000 gpd	Jan 1-Dec 31	Domestic	P-9918
15979	8/4/54	J. V. Gallndo	--	Springs tributary to Willow Creek	SE	NE	26	19N	8E	MD	0.04 cfs	Apr 1-Nov 1	Domestic, recreation, and irrigation, 3 acres	P-10060
16025	8/31/54	Raymond and Arthur K. Morrison	--	Spring tributary to Hog Canyon Creek	SW	SW	12	20N	11E	MD	0.18 cfs	May 1-Dec 1	Mining and domestic	P-10194
16045	9/15/54	Irene E. Grover	--	Sweetland Creek	NW	NW	17	17N	8E	MD	160 af	Oct 31-May 15	Stockwatering and irrigation, 100 acres	P-11134
16057	9/21/54	Mellon and Gobolic Development Corp.	--	Miners Ravine	NW	SW	34	11N	7E	MD	0.13 cfs	Apr 1-Oct 31	Irrigation, 10 acres	P-10017
16134	11/15/54	Irene E. Grover	--	Sweetland Creek	NW	NW	17	17N	8E	MD	150 af	Oct 31-Apr 1	Stockwatering and irrigation, 100 acres	P-10082
16165	12/3/54	J. R. Tavernetti	--	Spring tributary to Mosquito Creek	SE	NW	22	18N	8E	MD	1,000 gpd	Jan 1-Dec 31	Domestic	L-5282
16177	12/13/54	Cherokee Water Company, Inc.	--	Bloody Run Creek	NE	NW	32	18N	9E	MD	5 cfs	Apr 1-Nov 1	Domestic, stockwatering, and irrigation, 5,000 acres	Pending
16178	12/13/54	Cherokee Water Company, Inc.	--	Grizzly Creek	SW	SE	22	18N	9E	MD	2.5 cfs	Apr 1-Nov 1	Domestic, stockwatering, and irrigation, 5,000 acres	Pending
16205	1/14/55	George L. and Marion E. Robson	11N/7E-20P2	Tributary to Secret Ravine	SE	SW	20	11N	7E	MD	0.14 cfs	Apr 1-Nov 1	Domestic, stockwatering, and irrigation, 11 acres	P-10249
16207	1/17/55	Cherokee Water Company, Inc.	--	East Pork Middle Yuba River	SE	SE	30	19N	12E	MD	5 cfs	Apr 1-Nov 1	Domestic, stockwatering, and irrigation, 5,000 acres	Pending
16208	1/17/55	Cherokee Water Company, Inc.	--	Poorman Creek	NE	SE	9	18N	11E	MD	2.5 cfs	Apr 1-Nov 1	Domestic, stockwatering, and irrigation, 5,000 acres	Pending
16209	1/17/55	Cherokee Water Company, Inc.	--	McMurray Lake	NW	NE	5	18N	12E	MD	25 cfs	Apr 1-Nov 1	Domestic, stockwatering, and irrigation, 5,000 acres	Pending

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					1/4	1/4	Sec.	Tp.	R.	B. & M.				
16210	1/17/55	Cherokee Water Company, Inc.	--	Weaver Lake	NW	SW	32	19N	12E	MD	50 cfs	Apr 1-Nov 1	Domestic, stockwatering, and irrigation, 5,000 acres	Pending
16211	1/17/55	Cherokee Water Company, Inc.	--	Middle Yuba River	SW	SE	11	19N	12E	MD	50 cfs	Apr 1-Nov 1	Domestic, stockwatering, and irrigation, 5,000 acres	Pending
16289	3/18/55	Claude A. and Gladys S. Betterley	--	Spring tributary to Auburn Ravine	NE	NW	17	12N	8E	MD	0.03 cfs	Mar 1-Nov 1	Irrigation, 4 acres	L-5507
16315	4/15/55	City of Oroville	--	Dry Creek			26	19N	6E	MD	10 cfs	Jan 1-Dec 31	Municipal	Incomplete
				(Additional diversions from Feather River and its tributaries under this application)										
16326	4/21/55	Ora I. and Frank W. Crossley	11N/7E-10M1	Tributary to Secret Ravine	NE	SE	10	11N	7E	MD	0.44 cfs	Jan 1-Dec 31	Stockwatering and irrigation, 35 acres	P-11492
16327	4/21/55	Frank W. and Margaret M. Crossley	--	Tributary to Secret Ravine	NW	SW	11	11N	7E	MD	0.075 cfs	Jan 1-Dec 31	Stockwatering and irrigation, 6 acres	P-11493
16380	5/17/55	State of California Division of Highways District No. 3	--	Spring tributary to North Yuba River	NW	SE	31	20N	11E	MD	3,000 gpd	Jan 1-Dec 31	Domestic, industrial, and fire protection	P-10367
16437	6/23/55	Ralph B. Aitken	11N/7E-17M1	Antelope Creek	SW	NW	17	11N	7E	MD	0.31 cfs	Mar 1-Nov 1	Irrigation, 25 acres	L-5511
16511	8/10/55	Vahan Eghoian and Margurette M. Eghoian	--	Little Oregon Creek	NW	SE	10	18N	7E	MD	0.50 cfs	Jan 1-Dec 1	Domestic and irrigation, 40 acres	P-10917
16532	8/18/55	Delcree Goodridge Carringer	--	Tributary to Dirtyface Ravine	SW	SE	29	12N	8E	MD	0.25 cfs 5 af	Mar 1-Nov 1 Nov 1-Mar 1	Fish culture and irrigation, 40 acres	P-10508
			--	Tributary to Dirtyface Ravine	SW	SE	29	12N	8E	MD	0.25 cfs 2 af	Mar 1-Nov 1 Nov 1-Mar 1		
16542	8/23/55	Robert J. Agers, Jr. and Mildred E. Agers	--	Tributary to Brush Creek	NW	NE	6	16N	9E	MD	4,400 gpd	Jan 1-Dec 31	Domestic	Pending
16558	8/29/55	Laurence R. and Mary C. Brewer	--	Little Rock Creek	SE	SW	27	17N	9E	MD	6 af	Feb 1-May 1	Recreational	P-11367
16623	9/26/55	Gridley Stake, Church of Jesus Christ of Latter Day Saints	--	Spring tributary to Wolf Creek	Lot	10	2	15N	8E	MD	0.31 cfs	Jan 1-Dec 31	Domestic, recreation, and irrigation, 25 acres	P-10393
16626	9/27/55	Albert J. Nightingale	16N/7E-26N1	Tributary to Squirrel Creek	SW	SW	26	16N	7E	MD	0.25 cfs	Apr 1-Nov 1	Stockwatering and irrigation, 20 acres	P-10519
16642	9/30/55	James Ross McFarland	--	Carvin Creek	NE	NW	1	20N	12E	MD	2,500 gpd	Jan 1-Dec 31	Domestic	P-10775
16650	10/6/55	J. A. Beek	11N/7E-25N1	Carroll Creek	SW	SW	25	11N	7E	MD	0.20 cfs	Apr 1-Oct 15	Irrigation, 60 acres	P-10445
			11N/7E-35A2	Miners Ravine	NW	NW	35	11N	7E	MD	47 af	Oct 15-Apr 1		
16659	10/10/55	Walter C. Fiek	--	Tributary to Shady Creek	NW	SE	14	17N	8E	MD	0.25 cfs 12 af	Apr 1-Jul 15 Nov 1-Apr 1	Stockwatering, recreation, and irrigation, 20 acres	P-10458
16725	11/8/55	Alleghany Water District	19N/10E-34B1	Spring tributary to North Fork Kanaka Creek	NW	NE	34	19N	10E	MD	0.45 cfs	Jan 1-Dec 31	Municipal	P-10685
16726	11/8/55	County of Placer	--	Auburn Ravine	SW	SE	11	12N	7E	MD	35 cfs 25,800 af	Jan 1-Dec 31 Nov 1-May 1	Domestic, stockwatering, and irrigation, 79,000 acres	Pending
16727	11/8/55	County of Placer	--	Pleasant Grove Creek	SE	SW	11	11N	6E	MD	25 cfs 2,600 af	Jan 1-Dec 31 Nov 1-May 1	Domestic, stockwatering, and irrigation, 79,000 acres	Pending
				Auburn Ravine	SW	SE	11	12N	7E	MD	11,000 af	Nov 1-May 1		
16728	11/8/55	County of Placer	--	Auburn Ravine	SW	SE	11	12N	7E	MD	23,000 af	Nov 1-May 1	Domestic, stockwatering, and irrigation, 79,000 acres	Pending
				Doty Ravine	NW	NW	31	13N	7E	MD	75 cfs 10,800 af	Jan 1-Dec 31 Nov 1-May 1		

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					1/4	1/4	Sec.	Tp.	R.	B. & M.				
16729	11/8/55	County of Placer	--	Bear River	SW	NW	2	13N	8E	MD	35,700 af	Nov 1-May 1	Domestic and irrigation, 79,000 acres	Incomplete
16732	11/10/55	Fred, Sophia, and William Sanchez	--	Tributary to Bruch Creek	NW	NE	6	16N	9E	MD	2,400 gpd	Jan 1-Dec 31	Domestic	Pending
16763	12/5/55	Merlin and Velma Lay	--	Tributary to Wooley Creek	SW	SE	7	13N	9E	MD	11 af	Nov 1-May 1	Stockwatering and recreation	L-5508
16780	12/12/55	Bert L. Burde	17N/8E-16B1	Tributary to Shady Creek	NW	NE	16	17N	8E	MD	14 af	Oct 1-Apr 30	Stockwatering and irrigation, 120 acres	P-10602
			17N/8E-9Q1	Tributary to Shady Creek	NE	NW	16	17N	8E	MD	22 af	Oct 1-Apr 30		
16792	12/15/55	Irena E. Grover	--	Tributary to Sweetland Creek	NW	SW	17	17N	8E	MD	5.1 af	Oct 31-Apr 1	Stockwatering and irrigation, 100 acres	P-10815
			--	Tributary to Sweetland Creek	NE	SW	17	17N	8E	MD	1.2 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	SE	NW	17	17N	8E	MD	3.6 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	NE	SW	17	17N	8E	MD	0.6 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	NE	SW	17	17N	8E	MD	1.6 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	NE	SW	17	17N	8E	MD	6.7 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	NE	SW	17	17N	8E	MD	4.8 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	SW	NW	17	17N	8E	MD	1.2 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	SW	NW	17	17N	8E	MD	4.0 af	Oct 31-Apr 1		
			--	Sweetland Creek	SW	NW	17	17N	8E	MD	11.7 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	NW	NE	17	17N	8E	MD	9.7 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	NW	NE	17	17N	8E	MD	4.8 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	NE	NE	17	17N	8E	MD	3.4 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	SW	NE	17	17N	8E	MD	9.3 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	SE	NE	17	17N	8E	MD	7.0 af	Oct 31-Apr 1		
			--	Tributary to Sweetland Creek	SW	NE	17	17N	8E	MD	4.0 af	Oct 31-Apr 1		
			--	Sweetland Creek	SE	NE	17	17N	8E	MD	5.3 af	Oct 31-Apr 1		
16818	1/3/56	Cherokee Water Company, Inc.	--	Weaver Lake	NW	SW	32	19N	12E	MD	5,000 af	Nov 4-Apr 1	Domestic, stockwatering, and irrigation, 5,000 acres	Incomplete
16823	1/9/56	Lorin N. Trubschenck	17N/8E-4M1	Tributary to Middle Yuba River	SW	SW	4	17N	8E	MD	35 af	Nov 1-Apr 1	Irrigation, 50 acres	P-10823
16858	1/27/56	Violet C. Meyer	--	Tributary to Dutch Ravine	NW	SW	22	12N	8E	MD	40 af	Nov 1-May 1	Domestic, stockwatering, fire protection, and irrigation, 28 acres	P-10589
16874	1/31/56	Ida and Lorin Trubechenck	--	Tributary to Clear Creek	SE	SW	33	18N	8E	MD	0.6 cfs 21.4 af	Apr 1-Nov 1 Nov 1-Apr 1	Domestic, stockwatering, and irrigation, 50 acres	P-10804
16894	2/14/56	Howard W. and Mary E. King	--	Tributary to Secret Ravine	NE	NW	15	11N	7E	MD	0.05 cfs	Apr 1-Oct 1	Irrigation, 4 acres	P-11321
16974	3/28/56	Paul J. and Donna Thiringer	--	Tributary to Miners Ravine	SW	NW	26	11N	7E	MD	15 af	Oct 1-May 1	Stockwatering and irrigation, 35 acres	P-10644
16995	4/9/56	Rolland J. Kelly	--	Tributary to Doty Ravine	SE	SW	1	12N	7E	MD	0.38 cfs 5 af	Apr 1-Nov 1 Nov 1-Mar 1	Stockwatering and irrigation, 28.5 acres	P-11491
17135	6/14/56	Albert Anderson	20N/12E-22H1	Spring tributary to North Yuba River	NW	NE	27	20N	12E	MD	150 gpd	Jan 1-Dec 31	Domestic	P-10850
17136	6/14/56	A. C. and M. C. Lear	--	Spring tributary to North Yuba River	NW	NE	27	20N	12E	MD	150 gpd	Jan 1-Dec 31	Domestic	P-10851
17137	6/14/56	J. L. and D. K. McClellan	--	Spring tributary to North Yuba River	NW	NE	27	20N	12E	MD	150 gpd	Apr 1-Sept 15	Domestic	P-10852
17142	6/20/56	Oscar and L. P. Bailey	--	Tributary to Hiscox Ravine	SW	SE	18	16N	9E	MD	4.0 af	Dec 1-May 1	Recreation and irrigation, 16 acres	P-10833

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					1/4	1/4	Sec.	Tp.	R.	B. & M.				
17165	7/6/56	Downieville Public Utility District	--	Tributary to Slug Canyon	SE	SE	34	20N	10E	MD	0.22 cfs	Jan 1-Dec 31	Municipal	P-10893
17167	7/9/56	Fred C. and Jacqueline Detrom	--	Spring tributary to North Yuba River	NW	NE	27	20N	12E	MD	150 gpd	Jan 1-Dec 31	Domestic	P-10858
17173	7/12/56	J. W. and Jennie A. Adamson	--	Tributary to Secret Ravine	NW	SW	30	12N	8E	MD	0.25 cfs 12 af	Apr 1-Dec 1 Dec 1-May 1	Irrigation, 20 acres	P-11536
17223	8/9/56	Joseph S. and Mary G. Ferreira	13N/7E-35A1	Sailors Ravine	SE	NE	35	13N	7E	MD	0.625 cfs	Apr 1-Nov 1	Irrigation, 50 acres	P-11314
17224	8/9/56	Ralph E. and Julia H. Aitkan	-- --	Secret Ravine Secret Ravine	SW NW	NE SW	30 30	11N 11N	7E 7E	MD MD	1.77 cfs	Jan 1-Dec 31	Domestic, stockwatering, and irrigation, 140 acres	P-11763
17236	8/13/56	United States Tahoe National Forest	--	Weaver Lake	NW	SW	32	19N	12E	MD	0.01 cfs 4,320 af	May 1-Nov 30 Dec 1-May 1	Domestic and recreation	Pending
17244	8/21/56	Fred C. Havens	--	Tributary to Dry Creek	NE	NW	1	18N	6E	MD	0.075 cfs	Apr 15-Nov 1	Domestic and irrigation, 5 acres	P-10825
17245	8/21/56	Nino DeMartini	--	Spring tributary to Willow Creek	SE	SW	23	19N	8E	MD	0.025 cfs	Jan 1-Dec 31	Domestic and irrigation, 7 acres	P-10949
17258	8/27/56	D. O. and M. W. Newton	14N/8E-22P1	Ragsdale Creek	SE	SW	22	14N	8E	MD	20 af	Oct 15-Apr 15	Stockwatering, recreation, flood control, and irrigation, 60 acres	P-11462
17285	9/20/56	Vines R. Coulson	--	Kentucky Ravine	NW	SE	11	16N	7E	MD	0.25 cfs 37 af	Apr 1-Nov 1 Nov 1-Apr 1	Stockwatering, recreation, and irrigation, 20 acres	P-11045
17288	9/21/56	D. P. and E. C. Snyder	--	Tributary to North Yuba River	NE	NW	9	20N	13E	MD	500 gpd	Jan 1-Dec 31	Domestic and fire protection	P-10935
17299	9/28/56	County of Placer	-- --	Coon Creek Auburn Ravine	NW SW	SW SE	14 11	13N 12N	6E 7E	MD MD	6,000 af 9,000 af	Nov 1-May 1 Nov 1-May 1	Domestic, stockwatering, and irrigation, 79,000 acres	Pending
17300	10/1/56	Cordon I. and Beth L. Gulbranson	11N/7E-20P3	Secret Ravine	SE	SW	20	11N	7E	MD	0.3 cfs	May 1-Oct 31	Irrigation, 25 acres	P-10929
17383	12/7/56	Aster Kikuo Kondo	--	Miners Ravine	NE	NE	24	11N	7E	MD	0.44 cfs	May 1-Oct 31	Stockwatering and irrigation, 35 acres	P-11029
17407	12/26/56	Fred W. Mosher	--	Arizona Tunnel tributary to Jim Crow Creek	NE	SE	18	19N	11E	MD	0.20 cfs	May 1-Dec 1	Domestic and mining	P-11040
17414	1/3/57	Alice Dey	11N/8E-7B1	Miners Ravine	NW	NE	7	11N	8E	MD	0.25 cfs	Apr 15-Oct 15	Irrigation, 20 acres	Pending
17420	1/11/57	John K. Wilson	--	Tributary to Secret Ravine	NW	SE	26	12N	7E	MD	0.15 cfs 2.5 af	May 1-Oct 31 Nov 1-Apr 30	Irrigation, 28 acres	P-11173
17427	1/21/57	Charles L. and Lila S. Stark	--	Spring tributary to Auburn Ravine	NW	NE	18	12N	8E	MD	0.025 cfs	Jan 1-Dec 31	Domestic	P-10694
17430	1/23/57	Murray and Edith E. Young	14N/8E-20R1	Ragsdale Creek tributary to Wolf Creek	SE	SE	20	14N	8E	MD	0.3 cfs	Apr 1-Oct 31	Stockwatering and irrigation, 28 acres	P-11047
17437	1/29/57	Paul L. and Mary E. Conley	--	Tributary to Little Greenhorn Creek	NE	SW	34	16N	9E	MD	0.18 cfs 5.0 af	Apr 1-Nov 1 Nov 1-Apr 1	Domestic, recreation, and irrigation, 15 acres	P-11015
17495	3/5/57	Edward and Margaret Pilliard	14N/8E-35C1	Tributary to Magnolia Creek	NE	NW	35	14N	8E	MD	10 af	Nov 1-Apr 1	Stockwatering, recreation, and irrigation, 20 acres	P-11042
17533	3/28/57	United States Tahoe National Forest	--	Spring tributary to Salmon Creek	NE	SE	4	20N	12E	MD	6,500 gpd	May 1-Oct 31	Domestic	P-11060
17539	4/3/57	Clarence and Madeline Black	15N/7E-25M1	Tributary to Dry Creek	NE	NE	25	15N	7E	MD	0.18 cfs 15 af	Apr 1-Nov 1 Nov 1-Apr 1	Stockwatering and irrigation, 15 acres	P-11052

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					1/4	1/4	Sec.	Tp.	R.	B. & M.				
17571	4/25/57	George J. and Anne Legnitto	--	Antelope Creek	Movable diversion point within N½	NE	8	11N	7E	MD	0.10 cfs 1 af	Mar 1-Sept 30	Fish culture and irrigation, 8 acres	P-11120
17615	5/20/57	C. E. and Mabel Hanson	--	Little Oregon Creek	SE	SE	2	18N	8E	MD	0.67 cfs	Apr 1-Oct 31	Irrigation, 53 acres	Pending
17672	6/24/57	Harold Helland	--	Springs tributary to Grizzly Gulch	SW	SE	4	18N	9E	MD	200 gpd	Jul 31-Jun 30	Mining and domestic	P-11456
17767	8/12/57	Orin and Helen Brown	--	Tributary to Little Greenhorn Creek	SW	SE	34	16N	9E	MD	8 af	Nov 1-Apr 1	Stockwatering and irrigation, 20 acres	P-11458
17797	8/22/57	Richard C. and Dorothea W. Walker	--	Tributary to South Yuba River	SE	SE	20	17N	15E	MD	1,500 gpd	Jan 1-Dec 31	Domestic and recreation	P-11267
17798	8/22/57	J. Jerome Hill and Richard C. Walker	--	Tributary to South Yuba River	SE	SE	20	17N	15E	MD	1,500 gpd	Jan 1-Dec 31	Domestic and recreation	P-11268
17808	8/30/57	G. E., Jr. and J. A. Trimble	-- --	Spring tributary to South Yuba River Tributary to South Yuba River	SE NE	SW NW	17 20	17N 17N	14E 14E	MD MD	400 gpd .074 af	Jan 1-Dec 31 Jun 15-Jul 15	Domestic	P-11602
17827	9/19/57	United States Tahoe National Forest	--	Springs tributary to Chapman Creek	NE	NW	5	20N	13E	MD	0.01 cfs	May 1-Oct 31	Domestic	P-11555
17837	10/1/57	Conifer Wood Products	--	Tributary to Rock Creek	NE	SE	34	13N	8E	MD	40 af	Nov 1-May 1	Industrial	P-11332
17858	10/23/57	E. J. Lague	--	Springs tributary to Woodpecker Ravine	NE	SE	12	15N	8E	MD	0.05 cfs	Jan 1-Dec 31	Domestic and fish culture	P-11509
17860	10/24/57	State of California Division of Highways	--	Spring tributary to Bear River	NE	NE	10	16N	11E	MD	15,000 gpd	Jan 1-Dec 31	Domestic, industrial, fire protection, and irrigation	P-11350
17863	10/25/57	John and Donna B. Grimes	--	Tributary to South Fork Wolf Creek	NE	SW	31	16N	9E	MD	0.05 cfs 6 af	Apr 1-Nov 1 Nov 1-Apr 1	Domestic, stockwatering, and irrigation, 5 acres	P-11331
17867	10/31/57	United States Tahoe National Forest	--	Spring tributary to Lindsay Creek	NE	SE	20	18N	12E	MD	.06 cfs	May 1-Dec 1	Domestic	P-11386
17880	11/12/57	E. W. and J. D. Brodrick	--	Nigger Ravine tributary to East Branch of Slate Creek	NE	SW	27	22N	10E	MD	11 cfs	Jan 1-Dec 31	Mining	P-11600
17887	11/20/57	Robert M. Wheatley	--	Tributary to Dry Creek	SW	NW	13	17N	6E	MD	30 af	Nov 1-Mar 31	Stockwatering and irrigation, 10 acres	P-11400
17912	12/11/57	Robert W. Irvine	--	Springs tributary to Bear River	SW	SW	25	16N	10E	MD	0.025 cfs	Jan 1-Dec 31	Domestic and irrigation, 5 acres	P-11641
17916	12/16/57	Norman E. Quinn	--	Babie Creek	NW	NW	26	11N	7E	MD	5 af	Jan 1-May 1	Irrigation, 30 acres	P-11348
17918	12/17/57	Ruth Schmidt and Catherine W. Carson	--	Wolf Creek	NE	SE	5	14N	8E	MD	1.0 cfs	Apr 1-Nov 10	Irrigation, 70 acres	P-11685
17934	1/6/58	Chester G. Hanson	--	Independence Creek	NE	SE	30	20N	12E	MD	1,000 gpd	Mar 1-Dec 15	Domestic and irrigation, 1 acre	P-11550
17942	1/15/58	Carl C. Wollam	14N/8E-20G1	Long Hollow Ravine	SW	NE	20	14N	8E	MD	.5 cfs	Apr 15-Nov 1	Domestic, stockwatering, recreation, and irrigation, 20 acres	P-11413
18004	2/18/58	George Cox	--	Tributary to North Ravine	NE	NW	4	12N	8E	MD	0.12 cfs	Apr 15-Sept 15	Irrigation	P-11546
18010	2/21/58	Bradley-Turner Mines, Inc.	--	Marion Creek	SW	SW	28	19N	9E	MD	3 cfs	Jan 1-Dec 31	Mining	Pending
18011	2/21/58	Bradley-Turner Mines, Inc.	--	Marion Creek	SW	NE	32	19N	9E	MD	3 cfs	Jan 1-Dec 31	Mining	Pending

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18012	2/21/58	Bradley-Turner Mines, Inc.	--	Wayland Creek	SE	NW	32	19N	9E	MD	3 cfs	Jan 1-Dec 31	Mining	Pending
18013	2/21/58	Bradley-Turner Mines, Inc.	--	Wayland Creek	NW	NW	32	19N	9E	MD	3 cfs	Jan 1-Dec 31	Mining	Pending
18079	4/2/58	Geraldine Childers, Vernon L. and Juanita Patterson, and Elda Uribe	17N/8E-3A1	Tributary to Clear Creek	NE	NE	3	17N	8E	MD	6 af	Nov 1-Mar 31	Stockwatering and irrigation, 89 acres	P-11547
			--	Tributary to Clear Creek	NW	NE	3	17N	8E	MD	5 af	Nov 1-Mar 31		
			--	Tributary to Clear Creek	SW	NE	3	17N	8E	MD	3 af	Nov 1-Mar 31		
			--	Tributary to Clear Creek	SW	NE	3	17N	8E	MD	3 af	Nov 1-Mar 31		
			--	Tributary to Clear Creek	SW	NE	3	17N	8E	MD	2 af	Nov 1-Mar 31		
			--	Tributary to Clear Creek	SE	NE	3	17N	8E	MD	7 af	Nov 1-Mar 31		
18089	4/8/58	Harold E. Wentsch and Thomas J. Kelley	11N/7E-34H1	Tributary to Miners Ravine	NE	SE	34	11N	7E	MD	10 af	Nov 1-Apr 30	Recreation and irrigation 50 acres	P-11598
18170	6/5/58	T. and E. R. Bartsch	--	Little Willow Creek	SW	NE	21	18N	8E	MD	.025 cfs	Jan 1-Dec 31	Domestic and irrigation, 5 acres	P-11648
18175	6/10/58	Philip, John, Mario and Laurence Peroneni	--	Owl Creek tributary to South Yuba River	NE	SW	6	16N	8E	MD	0.5 cfs	May 1-Nov 1	Stockwatering and irrigation, 13 acres	Pending
18176	6/10/58	Philip, Louis, and John Peroneni	--	Shady Creek	SE	NW	7	16N	8E	MD	15 MI	May 1-Nov 1	Stockwatering and irrigation, 80 acres	Pending
			--	Shady Creek	NW	SW	6	16N	8E	MD				
18187	6/17/58	A. J. Oyster and Fred Snyder	--	Tributary to Canyon Creek	NE	NW	30	20N	9E	MD	1.0 cfs	Mar 1-Dec 31	Mining	P-11675
			--	Rock Creek	NW	SW	30	20N	9E	MD	2.0 cfs	Mar 1-Dec 31		
18212	7/9/58	August and Verdabelle M. Ebbert	--	Tributary to Salmon Lake	SE	NW	29	21N	12E	MD	3.0 cfs 24 af	Jan 1-Dec 31 Dec 1-Jun 30	Domestic and power	Pending
18214	7/11/58	Harry M. and Ruby M. Hill	--	Long Hollow Ravine	NW	NE	20	14N	8E	MD	0.2 cfs	Apr 15-Nov 1	Stockwatering, recreation, and irrigation, 11 acres	P-11635
18252	8/6/58	W. S. and Louise S. McKitrick	--	Springs tributary to South Yuba River	SE	SW	31	17N	8E	MD	0.125 cfs 9 af	Apr 1-Nov 1 Nov 1-Apr 1	Domestic, stockwatering, recreation, and irrigation	Pending
18279	8/21/58	H. L. Reeves	--	Spring tributary to Yuba River	SE	SW	4	20N	13E	MD	200 gpd	Jan 1-Dec 31	Domestic	Incomplete
18285	8/26/58	Western States Ventures, Inc.	--	Kanaka Creek	NE	NE	3	18N	10E	MD	2.0 cfs	Jun 1-Dec 31	Mining and domestic	Incomplete
18286	8/26/58	W. E. Mullis	--	Tributary to North Yuba River	SW	SE	4	20N	13E	MD	200 gpd	Jan 1-Dec 31	Domestic	Pending
18294	8/28/58	United States Tahoe National Forest	--	Marsh Tract Spring tributary to Rock Creek	SW	SE	26	17N	9E	MD	0.01 cfs	Jan 1-Dec 31	Domestic	Pending
18312	9/11/58	Roderic L. Hill	--	Spring tributary to North Yuba River	NW	SW	1	20N	12E	MD	400 gpd	Apr 1-Nov 30	Domestic	P-11735
18321	9/16/58	John P. and Helen N. Owens	--	Long Hollow Creek	NW	NE	20	14N	8E	MD	0.1 cfs	-	Domestic, stockwatering, and irrigation, 5 acres	Pending
18368	10/10/58	George G. Abernathy	--	Golden Gate Ravine tributary to Coats Creek	NE	NW	17	19N	7E	MD	0.25 cfs	Jan 1-Dec 31	Domestic and irrigation, 20 acres	Pending
18385	10/24/58	W. N. Meyer	--	Spring tributary to North Yuba River	SE	SW	31	20N	11E	MD	100 gpd	Jan 1-Dec 31	Domestic	Incomplete
18394	11/5/58	W. K. Buckley	--	Cold Spring tributary to North Yuba River	SW	SE	4	20N	13E	MD	300 gpd	May 1-Nov 1	Domestic	Incomplete
18395	11/5/58	G. T. Walker	--	Cold Spring tributary to North Yuba River	SW	SE	4	20N	13E	MD	300 gpd	May 1-Nov 1	Domestic	Incomplete
18396	11/5/58	L. C. Fuqua	--	Cold Spring tributary to North Yuba River	SW	SE	4	20N	13E	MD	300 gpd	May 1-Nov 1	Domestic	Incomplete
18407	11/13/58	R. C. and V. P. Patterson	--	Tributary to Bear River	SW	SW	29	14N	6E	MD	130 af	Dec 1-Apr 30	Recreation and irrigation, 165 acres	Pending

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18470	1/12/59	Joseph Gabel Brown and Blanche Farmer Brown	19N/9E-21L1 19N/9E-29A1 19N/9E-20N1	East Fork Indian Creek South Fork Indian Creek Grants Ravine	NE SE SW	SW SE SW	21 20 20	19N 19N 19N	9E 9E 9E	MD MD MD	3 cfs 7 cfs 5 cfs	Jan 1-Dec 31 Jan 1-Dec 31 Jan 1-Dec 31	Mining	Incomplete
18484	1/21/59	Ballard White, Jr.	--	Slate Castle Creek	NW	SW	36	20N	10E	MD	400 gpd	Jan 1-Dec 31	Domestic	Pending
18536	2/17/59	First Methodist Church of Loomis	--	Tributary to Secret Ravine	NE	NW	15	11N	7E	MD	0.1 cfs	Jan 1-Dec 31	Recreation and irrigation, 8 acres	Incomplete
18565	3/3/59	Oliver G. and Frances J. Milhous	--	Tributary to Shady Creek	SW	SW	21	17N	8E	MD	20 af	Nov 1-May 1	Domestic, stockwatering, recreation, and irrigation, 20 acres	Incomplete
18581	3/10/59	Robert and Ruth Paine	--	Tributary to North Yuba River	SW	SE	4	20N	13E	MD	200 gpd	Jan 1-Dec 31	Domestic	Incomplete
18583	3/10/59	United States Tahoe National Forest	--	Jackass Spring tributary to Middle Yuba River	NW	SW	2	18N	10E	MD	2,000 gpd	May 1-Oct 15	Stockwatering and fire protection	Incomplete
18584	3/10/59	United States Tahoe National Forest	--	Rocky Spring tributary to Middle Yuba River	NE	NW	32	18N	8E	MD	1,500 gpd	May 1-Sept 30	Stockwatering	Incomplete
18585	3/10/59	United States Tahoe National Forest	--	McCulloch Spring tributary to Middle Yuba River	NE	NE	9	18N	10E	MD	720 gpd	May 1-Sept 30	Stockwatering	Incomplete
18586	3/10/59	United States Tahoe National Forest	--	McGinnis Spring tributary to Middle Yuba River	NW	SE	8	18N	10E	MD	500 gpd	May 1-Sept 30	Stockwatering	Incomplete
18587	3/12/59	David M. Takagishi	11N/7E-15B1	Tributary to Secret Ravine	NW	NE	15	11N	7E	MD	0.075 cfs	May 1-Oct 31	Irrigation, 6 acres	Incomplete
18617	3/31/59	Walter E. Mariante	--	Tributary to Antelope Creek	SE	NW	26	12N	7E	MD	0.125 cfs 6 af	Apr 15-Oct 15 Nov 1-Mar 1	Irrigation, 12 acres	Incomplete
18653	4/20/59	Lawerence McKeever, Jr. and Margeret McKeever	--	Tributary to Secret Ravine	NE	NE	1	11N	7E	MD	0.025 cfs	Apr 1-Nov 1	Irrigation, 2 acres	Incomplete

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APPENDIX D

DETAILED DESCRIPTIONS OF CERTAIN SURFACE WATER DIVERSIONS

DETAILED DESCRIPTIONS
OF
CERTAIN SURFACE WATER DIVERSIONS

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water is delivered to the Browns Valley Ditch from diversion 17N/6E-4H1, owned by Frank Carmichael, and is received in exchange for water delivered to him through the Mahle Ditch during the irrigation season.

Nevada Irrigation District

Consideration was first given to the formation of an irrigation system in Nevada County in 1917. At that time landowners in the foothills feared that water supplies originating in the mountainous area to the east would be developed for use in the Sacramento Valley, or that hydro-electric power would be developed in a manner incompatible with full irrigation development in the foothills. In 1918 a local committee formed, and made several water filings to preserve the use of the water for the foothill area.

On March 15, 1921, another local committee presented a petition for the formation of an irrigation district to the Nevada County Supervisors. An election took place on August 4, 1921, which resulted in the formation of Nevada Irrigation District. At that time the district consisted of 202,000 acres in Nevada County.

It was realized at the outset that the development of the irrigation system would require the revenue from hydro-electric power production to finance a major portion of the project. This was accomplished by a contract with Pacific Gas and Electric Company whereby water developed by Nevada Irrigation District in the mountain regions would be transferred

to the company for the development of hydroelectric power. Basically the contract provided that the water would then be returned to the district in the foothill regions.

The lands within the newly formed district were not entirely without irrigation at the time of its formation. Many ditches that had been constructed to serve mines in Nevada and Placer Counties were serving small scattered parcels of irrigated land.

Construction was started in the mountain regions, and existing distribution systems within the district were purchased following approval of the water right applications by the State Division of Water Rights and the Federal Power Commission; approval of the necessary rights-of-way over public land by the Federal Power Commission; and the approval by the Bond Certification Commission for the sale of $7,500,000 of bonds. Purchase of the distribution systems and the Bowman Lake properties was completed in 1925.

During the time that the district was getting its construction program under way, landowners in Placer County between Auburn Ravine and Bear River became interested in an additional water supply. On December 10, 1926, approximately 66,500 acres in Placer County were annexed to the district, bringing the total area to about 268,500 acres.

On July 1, 1927, water was first delivered to Pacific Gas and Electric Company at Lake Spaulding. On May 15, 1928, the district voted a second bond issue of $2,595,000 to take care of the increased cost brought about

by the inclusion of the Placer County unit. This money, along with that remaining from the original bond issue, was to be used for construction of storage on Deer Creek at the Scotts Flat site; general extension of the already purchased distribution system in Nevada County; construction of Van Giesen Dam on the Bear River; purchase from Pacific Gas and Electric Company of its Gold Hill and Ophir irrigation systems in Placer County; and general extension of the distribution system in Placer County. This work was completed in the early 1930's, although some difficulty was encountered because of lack of funds needed to retire outstanding warrants and to complete the distribution system in Placer County.

The district is divided into three divisions for operational purposes. The Mountain Division comprises the mountainous area wherein water is developed and stored for the production of hydroelectric power and later use in the foothill regions. The Nevada and Placer Divisions encompass the foothill lands within the district boundary in Nevada and Placer Counties, respectively.

The location of the diversion facilities operated by the district are shown on sheets 1 through 23 of Plate 2, and sheets 1 and 2 of Plate 4. The following paragraphs outline the functions and principal features of each division.

Mountain Division

The Mountain Division of Nevada Irrigation District consists of the several storage reservoirs on upstream reaches of the Middle and South Yuba Rivers and canals to divert the

stored water to the penstock of Spaulding Powerhouse No. 3, which is owned by Pacific Gas and Electric Company. The two principal conduits for transporting this water are Milton-Bowman Tunnel and Bowman-Spaulding Conduit. The water is used for power generation at the powerplant, and is subsequently released to Lake Spaulding. The water is then released from Lake Spaulding for additional power generation by the company, and is returned to the district at six locations for use in the Placer Division,and at the Deer Creek Powerhouse tailrace for use in the Nevada Division. Water rights for all but two of the diversions in this division are based on appropriation applications filed with the State in accordance with the Water Commission Act.

The following is a description of each diversion:

Milton-Bowman Tunnel and Milton Reservoir (Diversion 19N/12E-12N1). Milton Reservoir, with a capacity of 270 acre-feet, was constructed by Nevada Irrigation District in 1928 for purposes of storing runoff to be diverted through the Milton-Bowman Tunnel to Bowman Reservoir. Additional water is received into the Milton-Bowman Tunnel from diversions 19N/12E-14F1 and 19N/12E-14H1, approximately 0.5 mile from Milton Reservoir. These diversions were constructed in 1934.

Upstream Reservoirs Releasing to Bowman Lake. The various reservoirs located upstream from Bowman Lake for the purpose of storing winter runoff for subsequent releases during the summer are: Jackson Lake, French Lake, Island Lake, and Sawmill Lake. The aggregate capacity of these reservoirs

is 17,270 acre-feet, of which 12,500 acre-feet are impounded in Jackson Lake. French Lake and Island Lake are located upstream from Sawmill Lake, thus enabling waters released from them to be regulated at Sawmill Lake.

All of these reservoirs were constructed prior to the formation of Nevada Irrigation District, and were purchased by the district. Island Lake and Sawmill Lake were purchased from North Bloomfield Gravel and Mining Company, November 25, 1925; French Lake from Summit Water and Irrigation Company, January 8, 1926; and Jackson Lake from San Juan Gold Mining Company, June 21, 1938.

Bowman Lake (Diversion 18N/12E-8C1). Bowman Lake was purchased from the Northern Water and Power Company, whose predecessor was the North Bloomfield Gravel and Mining Company, on November 25, 1925. Shortly thereafter construction commenced on new dams at the lake to increase the storage capacity. The original dam was constructed in 1872, and diverted water into the Bloomfield Ditch, which followed the main ridge between the South and Middle Forks of the Yuba River from the lake to the North Bloomfield Mine. At present the principal purpose of Bowman Lake is to store and regulate water released from Milton-Bowman Tunnel, Sawmill Lake, Island Lake, French Lake, and Jackson Lake for rediversion by the Bowman-Spaulding Conduit. This is accomplished by releasing into Canyon Creek for re-diversion at the Bowman-Spaulding Conduit.

Bowman-Spaulding Conduit (Diversion 18N/12E-8C2). Following the purchase of Bowman Lake and other upstream reservoirs, construction commenced on the Bowman-Spaulding Conduit to transmit Bowman Lake water to Pacific Gas and Electric Company's Sapulding Powerhouse No. 3. The conduit diverts from Canyon Creek 0.2 mile below Bowman Lake, and releases water to the powerplant at the head of the penstock.

Diversions Supplementing Bowman-Spaulding Conduit. During the construction of the Bowman Spaulding Conduit, five additional diversions were constructed on streams between Bowman Lake and Lake Spaulding. These diversions were on Fall Creek (Diversion 17N/12E-6D1), Trap Creek (Diversion 17N/12E-6M1) Rucker Creek (Diversion 17N/12E-7H1), Clear Creek (Diversion 18N/11E-36J1), and Texas Creek (Diversion 18N/12E-19P1).

Lakes owned by Pacific Gas and Electric Company release water through these streams for rediversion into the Bowman-Spaulding Conduit. The Texas Creek, Fall Creek, and Rucker Creek diversions replaced diversions owned by Pacific Gas and Electric Company which diverted to Lake Spaulding through the Texas and Fall Creeks Ditch.

The diversion of Trap Creek, Rucker Creek, and Clear Creek is accomplished by the interception of these creeks by the Bowman-Spaulding Conduit.

Nevada Division

The Nevada Division of Nevada Irrigation District encompasses all district lands in Nevada County. Areas of use within this division receive supply from ditches diverting from

Deer Creek, Wolf Creek, and South Yuba River. Ditches diverting from Deer Creek are supplemented by deliveries from Pacific Gas and Electric Company through its Deer Creek Powerhouse. In addition to this, water is conserved in Scotts Flat Reservoir on Deer Creek. With the exception of Scotts Flat Dam, all the works now in use in the Nevada Division were purchased by the irrigation district at the time of its formation.

All water diverted in the Nevada Division is used within that division, except for releases from D-S and Cascade Canals to Little Greenhorn Creek for rediversion in the Placer Division.

In 1957 the district irrigated approximately 8,940 acres in the division in addition to releasing to natural stream channels for diversion by individually owned diversions. Prior to the formation of the district, approximately 6,600 acres were irrigated in this area by other organizations. Pacific Gas and Electric Company provided service in the vicinity of Nevada City and Grass Valley; the Excelsior Water and Mining Company served lands west of Grass Valley; and the Blue Point Mining Company served an area southwest of Grass Valley. Crops in the district's Nevada Division service area consist primarily of irrigated pasture and deciduous orchard, as they did in 1921. In addition to irrigation, stockwatering, and individual domestic service, water is also supplied to the cities of Grass Valley and Nevada City.

In general, water is taken at diversions in this division under appropriative water rights filed with the State in accordance with the Water Commission Act. The exceptions

are Tarr Ditch, where water is taken under an adjudicated right, and Stone Ditch, where water is taken under an appropriative right established prior to the enactment of the Water Commission Act. All of the diversions from Deer Creek, with the exception of Scotts Flat Dam, divert under water right application No. 1615 which allows an aggregate total of 100 cubic feet per second to be diverted from Deer Creek through eight ditches. Of these eight ditches, seven are now in use and are reported as diversions herein. Following is a short discussion of the diversions within the Nevada Division:

Cascade Canal (Diversion 17N/10E-34E1). Cascade Canal was purchased from Pacific Gas and Electric Company, as successor to the South Yuba Water Company, on November 23, 1926. This ditch diverts from Deer Creek approximately one-fourth mile downstream from the Deer Creek Powerhouse through 58 miles of earth ditch, wood flume, and pipeline. From its diversion point it flows to the Empire Reservoir, located about 3 miles east of Grass Valley, which regulates the flow and releases into the Big Chicago Park Ditch, which divides to form Rattlesnake and Chicago Park Ditchs. Rattlesnake Ditch serves the area between Wolf Creek and South Wolf Creek with its laterals, the Cunningham, Kyler, Union Hill, White, Forest Springs, and Stockton Hill Ditches. Chicago Park Ditch follows the ridge between Wolf Creek and Greenhorn Creek, and terminates near Mt. Olive. These ditches distribute the water in the Greenhorn Creek, Wolf Creek, and Lake Combie Subunits for irrigation, stockwatering, and domestic uses. Water may be released from Banner Reservoir, located on a lateral of the

Cascade Canal, to supplement the D-S Canal. Water may also be released from the Chicago Park Ditch-to Little Greenhorn Creek to supplement the district's diversions from the Bear River in the Placer Division.

China Ditch (Diversion 16N/7E-20E1). China Ditch diverts from Deer Creek through 26 miles of earth ditch and wood flume for irrigation, stockwatering, and domestic uses in the area of Smartville and to the west of Smartville in the Deer Creek, Dry Creek, French Dry Creek, and Camp Beale Subunits. Principal laterals distributing the water in these areas are the Farm and Ousley Ditches. Additional supply for this diversion is received from the South Yuba River by releases from Excelsior Ditch into Deer Creek approximately one-fourth mile upstream from the diversion point of China Ditch.

China Ditch was constructed in 1860 to replace that part of the South Yuba Ditch (now Excelsior Ditch) from Deer Creek to the Smartville area. On September 14, 1925, the Nevada Irrigation District purchased the ditch from the Excelsior Mining and Water Company, sucessor to Excelsior Mining Company, Excelsior Water Company, and Excelsior Canal Company.

D-S Canal and Deer Creek Reservoir (Diversion 16N/9E-10B1). Deer Creek Reservoir, with a capacity of 1,400 acre-feet, and D-S Canal, which diverts directly from the reservoir, were constructed by Nevada Irrigation District in 1928 to further expand its distribution system in the Nevada Division. The canal, with its various distribution laterals, supplies water for irrigation, domestic, and stockwatering uses in the

Deer Creek and Wolf Creek Subunits, in addition to supplying the City of Grass Valley and a portion of Nevada City. The principal lateral from the D-S Canal is Grass Valley Ditch, which supplies Allison Ranch Ditch and its laterals, Cory, James, and Lafayette Ditches.

Portions of the water diverted through D-S Canal are released for supplemental supply to other Nevada Irrigation District facilities. At the terminus of Grass Valley Ditch, water is released to Rough and Ready Ditch. At the ends of Cory, James, and Allison Ranch Ditches, water is released to French Ravine and Wolf Creek for rediversion by Tarr and French Ravine Ditches. The D-S Canal terminates at and releases excess water into Little Greenhorn Creek, a tributary of Bear River, for use in the Placer Division. This water is normally rediverted from the Bear River through the Bear River Canal for use in Pacific Gas and Electric Company's power system, and returned to Nevada Irrigation District at several locations in the Placer Division.

Excelsior Ditch (Diversion 17N/8E-27H1). Excelsior Ditch diverts from the South Yuba River through approximately 19 miles of earth ditch and wood flume, including its principal extension, Keystone Ditch, for irrigation, stockwatering, and domestic uses in the French Corral, French Dry Creek, and Deer Creek Subunits.

Construction of Excelsior Ditch commenced in 1856, and water was first delivered to the Smartville area in the fall of 1859. At this time the canal was known as the South Yuba Ditch, and the water diverted was used entirely for mining purposes.

Shortly after the ditch was constructed it was decided to abandon that portion of the ditch from its crossing of Deer Creek to its terminus and to carry the water to the mines by a different route. China Ditch was constructed for this purpose in 1860. Excelsior Ditch was constructed by the Excelsior Canal Company, which was succeeded in order by the Excelsior Water Company, the Excelsior Mining Company, and the Excelsior Water and Mining Company. On September 14, 1925, the ditch was purchased by Nevada Irrigation District from the Excelsior Water and Mining Company.

A portion of the amount diverted by Excelsior Ditch is spilled to Deer Creek for rediversion through China Ditch.

Newtown Ditch (Diversion 16N/8E-12K1). Newtown Ditch, with its principal laterals, Pleasant Valley and Williams Ditches, diverts from Deer Creek through 19 miles of earth ditch and wood flume to supply water for irrigation, stockwatering, and domestic uses in the Deer Creek and French Corral Subunits. Excess water in Pleasant Valley Ditch is spilled into the Excelsior Ditch in the vicinity of Pleasant Valley.

Newtown Ditch was constructed in 1881 and purchased by Nevada Irrigation District on September 14, 1925, from the Excelsior Water and Mining Company.

Rough and Ready Ditch (Diversion 16N/9E-7H1). Rough and Ready Ditch diverts water from Deer Creek through approximately 13 miles of earth ditch for irrigation, domestic, and stockwatering uses in the Deer Creek Subunit. This ditch was constructed in 1850 for mining purposes in the area of Rough and Ready, but by the turn of the century all water diverted

was for agricultural use. On September 14, 1924, Nevada Irrigation District purchased Rough and Ready Ditch from Excelsior Water and Mining Company.

In addition to water diverted from Deer Creek by this ditch, water is received from D-S Canal through the Grass Valley Ditch. It is also possible for the Rough and Ready Ditch to spill water to supplement the Tunnel Ditch.

Scotts Flat Dam (Diversion 16N/9E-2R1). Scotts Flat Dam and Reservoir, with a capacity of 27,400 acre-feet, was constructed in 1947 by Nevada Irrigation District to store and regulate the flow of Deer Creek, including the discharge from Deer Creek Powerhouse. The water is released downstream for rediversion by the Tunnel, Newtown, China, and Rough and Ready Ditches and the D-S Canal.

Snow Mountain Ditch (Diversions 17N/10E-32M1 and 17N/10E-32E1). Snow Mountain Ditch was purchased from Pacific Gas and Electric Company, whose predecessor was the South Yuba Water Company, on November 23, 1926. The ditch was constructed prior to 1901. The ditch diverts from Deer Creek and receives supplemental supply through diversion 17N/10E-32E1 from the North Fork of Deer Creek at the crossing of the ditch over the creek. From this point the water flows along the north bank of Deer Creek through 15 miles of earth ditch and wood flume to its area of use north and northwest of Nevada City, in the French Corral and Deer Creek Subunits. Principal laterals distributing the water to the areas of use are the Cement Hill and Red Hill Ditches. In addition to irrigation, domestic,

and stockwatering uses, a portion of the Nevada City water supply is provided by the ditch.

Stone Ditch (Diversion 16N/8E-25C1). Stone Ditch diverts from Wolf Creek approximately a mile east of Grass Valley to irrigate a small parcel of land to the north of Wolf Creek and to supply Pacific Gas and Electric Company's gas plant in Grass Valley. This water is diverted under a 15-miner's inch appropriative water right established prior to 1914 and claimed by Pacific Gas and Electric Company. Since very little water flows this high on Wolf Creek during the irrigation season, water is released from the D-S Canal to augment the flow of Wolf Creek.

Tarr and French Ravine Ditches (Diversions 15N/8E-10R1 and 15N/8E-9K1). Tarr Ditch (Diversion 15N/8E-10R1) diverts from Wolf Creek through 35 miles of pipe, flume, and earth ditch. A large portion of this mileage is that of B Canal, a lateral the branches of which are Cole, Redinger, Viet Cameron, Wolf, Spoor, and Smith-Gordon Ditches and Clear Creek Lateral. The Smith-Gordon Ditch inturn has Bald Hill and Pet Hill Ditches as branches. French Ravine Ditch (Diversion 15N/8E-9K1) diverts from French Ravine into the Tarr Ditch approximately one and one-half miles from the diversion point of Tarr Ditch. Supplemental water for these diversions is provided by spills from the D-S Canal into French Ravine and Wolf Creek upstream from the diversion points.

Tarr Ditch diverts for irrigation, domestic, and stockwatering uses in the Wolf Creek, Dry Creek, Camp Far West, and Deer Creek Subunits. The ditch was constructed in 1858 by the

Nevada Reservoir Ditch Company to divert water from Wolf Creek to the mines near Smartville. At a later date the ownership was changed to New Blue Point Mining Company, which sold the ditch to Nevada Irrigation District on June 12, 1926. At the time of the purchase of this ditch, it was the principal irrigation source for the area southwest of Grass Valley.

Water right litigation concerning this ditch and other diversions from Wolf Creek took place in 1932, and the judgment established that only imported water and that natural runoff above the amounts to which certain downstream users are entitled could be diverted by Nevada Irrigation District. A further explanation of the proceeding is provided in Appendix C.

Tunnel Ditch (Diversion 16N/8E-18M1). Tunnel Ditch diverts from Deer Creek approximately one mile northeast of the community of Rough and Ready. The length of the ditch is 12 miles, which includes its two main laterals, Riffle Box and Rex Ditches. These ditches distribute water in the area west and southeast of Rough and Ready for irrigation, stockwatering, and domestic uses in Deer Creek Subunit.

Tunnel Ditch was constructed in 1852 for mining purposes in the vicinity of Rough and Ready. Shortly after the formation of Nevada Irrigation District, the ditch was purchased from the Excelsior Water and Mining Company. Additional supply is received for this diversion from irrigation tail water and spill from Rough and Ready Ditch.

Placer Division

The Placer Division of Nevada Irrigation District encompasses all of the district in Placer County. In 1957 approximately 14,300 acres were irrigated in the division by the district in addition to supplementing individual irrigation diversions by releasing to natural streams. Domestic and industrial water service was also supplied within the division.

The primary diversion facilities in this division are Van Giesen Dam, Gold Hill Canal, and Auburn Ravine Canal. The water supply developed by these facilities is augmented by water from the Mountain Division delivered through the Pacific Gas and Electric Company's power system. Deliveries by Pacific Gas and Electric Company are made at six locations. These deliveries are from Wise Canal through the Rock Creek North Ditch, from Fiddler Green Canal through the Ophir Pipe and Edgewood Pump, from two spills from South Canal to Auburn Ravine, and from releases down the Bear River from the head of the Bear River Canal. This water is in exchange for water delivered to Pacific Gas and Electric Company through the Bowman-Spaulding Conduit at Spaulding Powerhouse No. 3.

Water rights of the division fall into two categories. The first are based on appropriation applications filed with the State on all of the projects constructed by the district since its organization. The second are claims of appropriation by the predecessor companies from whom the district purchased water systems. The principal system in the latter category is the Gold Hill Canal system. This facility was purchased from

Pacific Gas and Electric Company, and includes basically the Gold Hill, Auburn Ravine, and Camp Far West Canals and their various laterals and extensions. Claimed rights for these systems are for 22 cubic feet per second from the Bear River at the Gold Hill diversion; 10 cubic feet per second from Auburn Ravine at the Auburn Ravine Canal; and for all of the water available from various streams at minor diversion points located within the area of the Gold Hill system.

Following is a description of each diversion in the Placer Division:

Van Giesen Dam and Lake Combie (Diversion 13N/8E-2E1). Van Giesen Dam, which forms Lake Combie with a storage capacity of 9,600 acre-feet, was constructed by Nevada Irrigation District in 1928 to store and regulate flow of the Bear River. In addition to these functions, the reservoir re-regulates water from Pacific Gas and Electric Company released to the Bear River at the head of the Bear River Canal. Water stored in the reservoir is used to supply Magnolia No. 3 Ditch and Gold Hill Canal.

Magnolia No. 3 Ditch (Diversion 13N/8E-2E2). Magnolia No. 3 Ditch was constructed by Nevada Irrigation District in 1934 to divert water from Lake Combie to the north of the Bear River for irrigation, stockwatering, and domestic uses in the Wolf Creek and Combie Subunits. Diversion is accomplished by means of either a hydraulic ram or an electric pump, each located at the dam, to raise the water to the ditch. The earth ditch, with its principal lateral, Hoefer Ditch, extends for 9 miles to the north of Lake Combie. Water that is spilled from the hydraulic ram returns to the Bear River and is rediverted by the Gold Hill Canal downstream.

Gold Hill Canal (Diversion 13N/8E-3H1). Gold Hill Canal transmits water diverted from Bear River below Van Giesen Dam to the area north and west of Auburn. It has a length of 96.5 miles, made up of earth ditch, pipe, and wood flume. This length includes its principal laterals, the Combie-Ophir Canal, Lone Star Canal, Magnolia No. 1 Ditch, Gold Blossom Canal, Valley View Canal, and Dudley Canal.

Gold Hill Canal was constructed by the South Yuba Water Company prior to 1901 for mining purposes in the Gold Hill area; but as mining uses decreased, farmers in the area purchased the water for their crops. The canal was purchased in 1933 from Pacific Gas and Electric Company, successor of the South Yuba Water Company.

Water diverted through the Gold Hill Canal is for irrigation, domestic, and stockwatering uses in the Wolf Creek, Combie, Coon Creek, Auburn Ravine, and Camp Far West Subunits. The major portion of its use is in the Placer Division, although a portion of the water which is transmitted through Magnolia No. 1 Ditch is used in the Nevada Division north of the Bear River in Nevada County. A portion of the water released to the Valley View Canal is combined with water from the Camp Far West Canal delivered through the Whisky Diggins Canal for use in Coon Creek Subunit.

Auburn Ravine Canal (Diversion 12N/7E-14A1). Auburn Ravine Canal diverts from Auburn Ravine, at a point to the west of Auburn, to supplement the Gold Hill Canal. From the junction of this canal and Gold Hill Canal, water is distributed by the

Lincoln and Doty Ravine North Ditches, Gladding-Comstock Ditch, and the lower portion of the Gold Hill Canal. Additional supply is received from the Coon Creek Pump diverting to the Gladding-Comstock Ditch. These ditches supply water for irrigation, stockwatering, and domestic uses.

A large portion of the amount diverted from Auburn Ravine is supplied by two deliveries from Pacific Gas and Electric Company's South Canal by spill to Auburn Ravine.

Doty's South Ditch (Diversion 13N/6E-36G1). Doty's South Ditch diverts from Doty Ravine at a point to the northeast of Lincoln, and serves irrigated areas north and northwest of Lincoln in conjunction with water from the Gold Hill Canal. An interchange ditch, located approximately one mile downstream from the diversion point, allows water to be diverted from Doty's South Ditch into the Gold Hill Canal or vice versa.

Water diverted from Doty Ravine by this diversion is primarily return water from irrigation upstream.

Camp Far West Canal (Diversion 13N/7E-13N1). Camp Far West Canal diverts from Coon Creek at a point northwest of Auburn for irrigation, stockwatering, and domestic uses in the Coon Creek and Camp Far West Subunits. Approximately 0.5 mile downstream from the head of the ditch, the Whisky Diggins Canal splits off and supplements the Valley View Canal lateral of the Gold Hill Canal.

The Camp Far West Canal was originally constructed for mining purposes, but in 1933, when Nevada Irrigation District purchased the canal from Pacific Gas and Electric Company, it was used entirely for irrigation.

Due to the relatively low flow of Coon Creek in the summer months, additional supply is delivered to this diversion via Orr Creek and Rock Creek. Deliveries are made through Gold Hill Canal at the Orr Creek Dam, a part of the Gold Hill Canal facilities, and through Rock Creek North Ditch from the Pacific Gas and Electric Company's Wise Canal.

Coon Creek Pump (Diversion 13N/6E-22A1). Coon Creek Pump diverts from Coon Creek into the Gladding-Comstock Ditch, which is an extension of the Auburn Ravine and Gold Hill Canals. The flow of water in Coon Creek at the point of diversion is sustained primarily by return water from irrigation upstream.

Pacific Gas and Electric Company

The Pacific Gas and Electric Company was incorporated on October 10, 1905. In the Yuba-Bear Rivers Hydrographic Unit area the company succeeded the California Gas and Electric Corporation. The corporation had purchased the Bay Counties Power Company on December 6, 1901 and the South Yuba Water Company on January 4, 1905. These companies were actively associated with most of the development of the present Pacific Gas and Electric Company water and power systems in the Yuba-Bear Rivers Hydrographic Unit.

The South Yuba Water Company had its beginning about 1850 in three small companies. These were the Rock Creek Water Company, Coyote and Deer Creek Water Company, and South Yuba Snow Mountain Ditch Company. In 1854 these companies consolidated under the name of Rock Creek, Deer Creek, and South Yuba Canal Company. The name was changed, along with subsequent incorporations of other small water companies, to the South Yuba Canal Company in 1870; to South Yuba Water and Mining Company in 1877; and finally to South Yuba Water Company in 1890.

During this period, and up to the time of its purchase by California Gas and Electric Corporation, the construction by the company and its predecessors included South Yuba Canal, Boardman Canal, the original Spaulding Dam, and most of the presently reported diversions from the South Yuba and Bear Rivers and their tributaries. In 1890 the Bear River Canal was purchased from the Bear River and Auburn Water and Mining Company by the South Yuba Water Company. About 1895 the company had an excess of usable water due to the decline of the hydraulic mining industry, and three powerplants were constructed by a subsidiary, the Central California Electric Company, to provide a use for this excess water. Today only one of the three, Alta Powerhouse, remains in commission.

The Bay Counties Power Company had its beginning in June 1900, when it purchased the Yuba Powerhouse in Browns Valley, Colgate Powerhouse, Colgate Flume, and Lake Francis Dam, from A. S. Morally. The Yuba Powerhouse was built by John Martin in 1897, and was successively sold to Yuba Power Company later in 1897, to Yuba Electric Power Company in February 1899, and to A. S. Morally in May 1900. The powerplant was in operation until 1911. The Colgate Powerhouse, the 7.6-mile Colgate Flume which was located just above and parallel to the old Browns Valley Irrigation District flume, and Lake Francis Dam were constructed by the Yuba Electric Power Company during the period February 1899 to May 1900.

During the first seven years following the organization of Pacific Gas and Electric Company, the only water development

for power was the construction of Deer Creek Powerhouse on Deer Creek at the terminus of the South Yuba Canal. In 1912, however, construction was started on the New Spaulding Dam and Drum Canal. Subsequently, Halsey and Wise Powerhouses were constructed on the Bear River and Wise Canals, respectively. Two other powerplants, Bullards Bar and Narrows, were constructed in 1924 and 1942, respectively, at dams already constructed for debris control, and in 1943 Dutch Flat Tunnel and Dutch Flat Powerhouse were placed in operation. Subsequent to the powerplant construction at Bullards Bar, the dam was purchased by the company. The Narrows Powerhouse utilizes the pressure head developed at Englebright Dam, which is owned by the California Debris Commission.

Many of the ditches acquired by Pacific Gas and Electric Company through the South Yuba Water Company were serving areas within the boundaries of Nevada Irrigation District at the time of its formation. The district's need for distribution facilities resulted in the sale to the district of all the company's irrigation ditches in Nevada County, and the Gold Hill and Ophir Ditch systems in Placer County. The sales of the facilities in Nevada County and Placer County were in 1926 and 1933, respectively. The Ophir system has been modified, and now comprises essentially the facilities associated with the Combie-Ophir Canal, a branch of the Gold Hill Canal. In 1924, shortly after the formation of Nevada Irrigation District, a contract between the district and the company was negotiated wherein water developed by the district would be routed through the company's power system and subsequently returned to the district. This contract was

subsequently modified to meet new requirements of the district. This transfer of water is accomplished by diverting water developed by the district in the North and Middle Yuba Rivers watershed to Spaulding Powerhouse No. 3, which releases to Lake Spaulding. From Lake Spaulding the water is released for additional power generation by routing through either Spaulding Powerhouse No. 1, Drum, Dutch Flat, Halsey and Wise Powerhouses; or through Spaulding Powerhouse No. 2 to Deer Creek Powerhouse. Water which is diverted through Spaulding Powerhouse No. 1 is returned to the district at six locations for use in Placer County, and that diverted through Spaulding Powerhouse No. 2 is returned at the Deer Creek Powerhouse tailrace for use in Nevada County.

Pacific Gas and Electric Company diverts water under appropriations made by the company and its predecessors before and after the enactment of the Water Commission Act. The company's applications for appropriation made in accordance with the act are included in Table C-1.

For purposes of describing the company's facilities in the Yuba-Bear Rivers Hydrographic Unit, diversions are divided into three categories. These are the North Yuba River Power System, the South Yuba and Bear Rivers Power System, and the Placer Water System. The North Yuba River Power System is in the company's Colgate Division, and the South Yuba and Bear Rivers Power System and the Placer Water System are in the Drum Division.

The main features of these systems are depicted in detail on sheets 1 through 23 of Plate 2. In addition, the South Yuba and Bear Rivers Power and the Placer Water Systems are summarized on Plate 5.

North Yuba River Power System

The North Yuba River Power System includes Pacific Gas and Electric Company's diversions on the North Yuba River and its Narrows Powerhouse on the Yuba River. Diversion facilities located within this system divert water solely for the production of hydroelectric power.

Following are discussions of the diversion facilities within this system:

Bullards Bar Dam and Reservoir (Diversion 18N/7E-24D1). Bullards Bar Reservoir, with a capacity of 31,490 acre-feet, was constructed on the North Yuba River in 1923-24 as a debris control structure to provide the required settling basin for upstream hydraulic mining. Construction of the dam was undertaken by a group of miners, headed by H. P. Whitney, to replace a smaller inadequate dam that was constructed in 1921. To take advantage of the storage facilities and hydraulic head provided by the new dam, Pacific Gas and Electric Company constructed the Bullards Bar Powerhouse at the foot of the dam, and diverted water through the powerhouse under a lease agreement with its owners. Later the company purchased the dam and reservoir.

The present installed generating capacity of the powerplant is 6,500 kilowatts. The water released from the reservoir through the powerplant is rediverted through Colgate Tunnel downstream.

Colgate Tunnel and Powerhouse (Diversion 18N/7E-25F1). Colgate Tunnel and the diversion dam at the head of the tunnel were constructed by Pacific Gas and Electric Company in 1941 to

replace North Yuba Dam and Colgate Flume which supplied Colgate Powerhouse. A portion of the water diverted through the tunnel is used to supply Browns Valley Ditch under an agreement with Browns Valley Irrigation District. This is accomplished by releasing water to the ditch near the head of the penstock to the powerplant. This agreement and the history of these facilities are further discussed in the description of the facilities of Browns Valley Irrigation District.

In 1946 the original Colgate Powerhouse was damaged by fire, and was replaced in 1949 by a new plant. The present generating capacity of the plant is 24,000 kilowatts. Water for this diversion is regulated by storage in Bullards Bar Reservoir upstream.

Lake Francis (Diversion 17N/7E-5J1). Lake Francis was constructed in 1901 by the Yuba Electric Power Company to provide a supplemental water supply for Colgate Powerhouse. At that time, water was diverted by means of a wood stave pipe from the lake to the head of the powerplant penstock. When the Colgate Tunnel was constructed in 1941, the head of the penstock was elevated so that it was impossible to divert water through the pipe from the lake to the penstock. Therefore an agreement was made with Browns Valley Irrigation District to deliver Lake Francis water to the district in lieu of a similar amount of North Fork Yuba River water which was formerly delivered to the district through Colgate Flume. The lake water is delivered to the district by releasing it to Dobbins Creek, from which it is diverted into the Browns Valley Ditch.

Narrows Dam and Powerhouse (Diversion 16N/6E-14Q1). Narrows Powerhouse was constructed by Pacific Gas and Electric Company in 1942 to take advantage of the releases from the previously constructed Narrows Dam, which forms Englebright Reservoir. This dam was constructed by the California Debris Commission in 1941. Water is taken from the reservoir through a tunnel constructed around the dam to the powerplant. The present installed generating capacity of the powerplant is 9,350 kilowatts.

All water stored in Englebright Reservoir and diverted through the powerplant is taken under appropriative water rights filed with the State by Pacific Gas and Electric Company.

South Yuba and Bear Rivers Power System

The South Yuba and Bear Rivers Power System includes upstream water storage facilities on the South Yuba River and the facilities to deliver this water to the downstream hydroelectric powerplants. Water diverted through this system is also the primary supply of the Placer Water System. In addition to water that is stored and diverted by Pacific Gas and Electric Company, water that is developed by Nevada Irrigation District is routed through the system for the generation of power.

Following are discussions of the diversion facilities within this system:

Lake Spaulding and Spaulding Powerhouse Nos. 1, 2, and 3 (Diversion 17N/12E-20H1). The original Spaulding Dam on South Yuba River was constructed by the South Yuba Water Company in 1892-93 to supplement the water supply to the South Yuba Canal.

The present dam, located about one-half mile downstream from the original structure, was constructed to a height of 225 feet in 1912-13. In 1916 the dam was raised to 260 feet, and in 1919 to its present height of 275 feet.

The reservoir created by Spaulding Dam is the main storage and regulatory facility in the South Yuba and Bear Rivers Power System. Water for the reservoir is supplied by runoff of the South Yuba River, releases from upstream storage facilities on the South Yuba River, and releases from Spaulding Powerhouse No. 3. Spaulding Powerhouse No. 3, with a generating capacity of 5,200 kilowatts, is supplied by the Nevada Irrigation District's Bowman-Spaulding Conduit, which transports water developed by the district in the Middle and North Yuba Rivers watersheds.

Water is stored in Lake Spaulding and released as required through a short tunnel at the left abutment of the dam to either Spaulding Powerhouse No. 1 or No. 2. Water that enters Spaulding Powerhouse No. 1 flows into the Drum Canal at the powerplant tailrace, while that released through Spaulding Powerhouse No. 2 enters the South Yuba Canal. The installed generating capacities of these powerplants are 6,400 kilowatts at Spaulding No. 1 and 3,370 kilowatts at Spaulding No. 2.

Upstream Reservoirs Releasing to Lake Spaulding. Pacific Gas and Electric Company has a number of reservoirs located upstream from Lake Spaulding which are used to store winter runoff for subsequent release during the summer. These are: Blue Lake, Fuller Lake, Rucker Lake, Upper and Lower Feeley Lakes, Middle and Lower Lindsay Lakes, Lake Culbertson, Upper

Rock Lake, Lake Fordyce, Meadow Lake, Lake Sterling, White Rock Lake, Lake Van Norden, Kidd Lake, and Upper and Lower Peak Lakes. Water from Blue Lake, Fuller Lake, Rucker Lake, Feeley Lakes, Lindsay Lakes, Lake Culbertson, and Upper Rock Lake is released to the Bowman-Spaulding Conduit and reaches Lake Spaulding through Spaulding Powerhouse No. 3. The remaining lakes are located on tributaries of the South Yuba River upstream from Lake Spaulding, and water is released directly thereto.

The aggregate capacity of these reservoirs is 68,470 acre-feet, of which a total of 46,660 acre-feet is impounded in Lake Fordyce. Lake Fordyce Dam was constructed in 1873-81 by the South Yuba Canal Company, and was enlarged in 1914 to a height of 140 feet by Pacific Gas and Electric Company. Lake Van Norden Dam was constructed by the company in 1916. Dams at all other reservoirs were constructed by predecessors of the South Yuba Water Company.

Prior to construction of Bowman-Spaulding Conduit by Nevada Irrigation District, water from reservoirs tributary thereto was delivered to Lake Spaulding through the Fall and Texas Creeks Ditch. This ditch was abandoned when the Bowman-Spaulding Conduit was constructed.

South Yuba Canal and Deer Creek Powerhouse (Diversion 17N/12E-20J2). The South Yuba Canal was constructed in 1865 by the South Yuba Canal Company to provide additional water to the Bear River Canal, and to the mines in the Grass Valley and Nevada City areas. After the canal was acquired by Pacific Gas and Electric Company, the Deer Creek Powerhouse was constructed.

The plant was commissioned in 1908 as the first hydroelectric powerplant to be constructed by the new organization.

The South Yuba Canal conveys water which is released from Lake Spaulding through Spaulding Powerhouse No. 2 to Deer Creek Powerhouse on Deer Creek. The water is discharged from the powerplant to Nevada Irrigation District. The present generating capacity of the powerplant is 5,500 kilowatts.

A portion of the water diverted at the head of the canal is spilled to the Bear River for rediversion to Boardman Canal or Dutch Flat Tunnel and Bear River Canal. The Boardman Canal normally receives this water.

Drum Canal and Powerhouse (Diversion 17N/12E-20J1). Drum Canal and Drum Powerhouse were constructed in 1912-13 when Spaulding Dam was built. The construction was part of Pacific Gas and Electric Company's expansion to meet new demands for power service. Water was first delivered to the powerplant on November 26, 1913.

Water conveyed by Drum Canal is released from Lake Spaulding through Spaulding Powerhouse No. 1. The canal has a length of 8.5 miles to the Drum Powerhouse, which is located on the Bear River and has a generating capacity of 48,000 kilowatts.

Water discharged from Drum Powerhouse to the Bear River is rediverted downstream, first to the Dutch Flat Tunnel and then to the Bear River Canal. Water may also be released from the powerplant forebay to Canyon Creek for rediversion to the Boardman Canal system.

Additional water supply from Drum Canal is received at a point near Emigrant Gap through the Lake Valley Canal, which conveys water from the North Fork of North Fork American River. This is an import to the Yuba-Bear Rivers Hydrographic Unit which is discussed in the section of this report entitled "Imports and Exports."

Dutch Flat Tunnel and Powerhouse (Diversion 16N/11E-17E1). Dutch Flat Tunnel and Dutch Flat Powerhouse were constructed in 1942-43 and commissioned on March 29, 1943. The system was constructed to utilize the hydraulic head available between the Drum Powerhouse tailrace and the Bear River Canal diversion dam. The water diverted to the tunnel is supplied almost in its entirety by the releases from Drum Powerhouse. The present generating capacity of the powerplant is 22,000 kilowatts.

Bear River, Wise, and South Canals; and Halsey and Wise Powerhouses (Diversion 15N/9E-22Q1). The Bear River Canal was constructed in 1852 to convey water from the Bear River near Colfax to near Auburn. It was one of the first canals in Placer County, and water was diverted for mining uses north of Auburn. This system was expanded in the late 1890's, when the South Yuba Water Company constructed powerplants at Newcastle and Auburn. These powerplants were closed in 1912 and 1914, respectively.

In 1916 the company constructed Halsey Powerhouse at the terminus of the present Bear River Canal, and in 1917 Wise Canal and Powerhouse were constructed to utilize the hydraulic head available between Halsey Powerhouse afterbay

and Auburn Ravine. In 1919 South Canal was constructed to convey the water from Wise Powerhouse tailrace to the American River. The generating capacity of each of these powerhouses is 12,000 kilowatts.

At present, the Bear River Canal conveys water to generate power in Halsey and Wise Powerhouses, to supply a portion of the Placer Water System, and to return a portion of the Nevada Irrigation District's mountain water supply.

A large portion of the water conveyed in the canal is South Yuba River water discharged from Drum Powerhouse.

The principal releases to the Placer Water System are made from Bear River Canal to the Ragsdale Tunnel and Upper Bowman Canals; from Wise Canal to the Fiddler Green and Lower Bowman Canals; and from South Canal to the Dutch Ravine, Lower Greeley, and Boardman Canals.

Deliveries to Nevada Irrigation District are made to Ophir Pipe and Edgewood Pump from the Fiddler Green Canal, to Rock Creek North Ditch from the Wise Canal, and to Auburn Ravine at two spills from the South Canal. Water is also released down the Bear River at the Bear River Canal diversion dam for rediversion by the district.

Alta Powerhouse. Alta Powerhouse is located on Towle Canal, a part of the Placer Water System. The powerplant was constructed by the South Yuba Water Company in 1902 to utilize the hydraulic head available in the water supply system. The present generating capacity of the powerplant is 2,000 kilowatts.

Placer Water System

The Placer Water System provides water service to most of the area along Highway 40 between Roseville and Baxter. The system served 13,466 acres of irrigated land and the urban areas listed in Chapter II of this report in the Yuba-Bear Rivers Hydrographic Unit in 1957. In addition, most of the water supplied to the American River watershed north of the North Fork American River was provided by this sytem.

The Placer Water System comprises the Boardman Canal system and those portions of the Bear River Canal system which distribute irrigation, domestic, municipal, and industrial water. The portion of the Boardman Canal system above Lake Alta and Alta Powerhouse is operated as part of Pacific Gas and Electric Company's power system.

The Boardman Canal was constructed in 1893 by the South Yuba Water Company. At that time irrigation was beginning to replace the declining hydraulic mining industry as a major water use.

At present, the Boardman Canal system comprises several connected canals of varying capacities, and numerous distribution laterals. Water is first diverted from the Bear River at 17N/11E-36D1, and taken through the Upper Boardman Canal to Canyon Creek in the American River watershed. The water passes down the creek for a short distance and is rediverted into Towle Canal (import diversion 16N/11E-21E1) which conveys it to Alta Powerhouse. From the powerplant to Lake Alta the canal is known as the Boardman Canal (lower). From Lake Alta

to Monte Vista it is called the Cedar Creek Canal, and from Monte Vista to its terminus at the Roseville Regulator it is again known as the Boardman Canal. Exclusive of laterals, the canal system is 73.7 miles in length from the Bear River to the Roseville Regulator.

The Boardman Canal system receives additional water at several points in its upper reaches. Canyon Creek runoff is diverted at Pulp Mill Canal (16N/10E-36Q1) and also at the Towle Canal diversion point. Pitman Ravine runoff is diverted at 16N/11E-9J1, and Little Bear River runoff may be diverted at the Alta Powerhouse afterbay (16N/10E-25P1). Water is also received from Drum Canal by releases from Drum Forebay to Canyon Creek for rediversion into Towle Canal. The lower portion of the Boardman Canal system is recharged from the Bear River Canal system at several points.

Most of the water deliveries from the Boardman Canal system are made in the Auburn-Rocklin area. The principal laterals are Shirland, Greeley, Red Ravine, and Caperton Canals.

Those portions of the Bear River Canal system which are a part of the Placer Water System are principally the Ragsdale Tunnel Canal, Bowman Upper Canal, Bowman Lower Canal, Fiddler Green Canal and its laterals Fiddler Green-Boardman Diversion Canal and Lower Banvard Canal. Recharge to the Boardman Canal is effected at Ragsdale Tunnel Canal and Fiddler Green-Boardman Diversion Canal. In addition, releases are made from South Canal to Caperton Canal (Via Dutch Ravine Canal), Boardman Canal, and Lower Greeley Canal.